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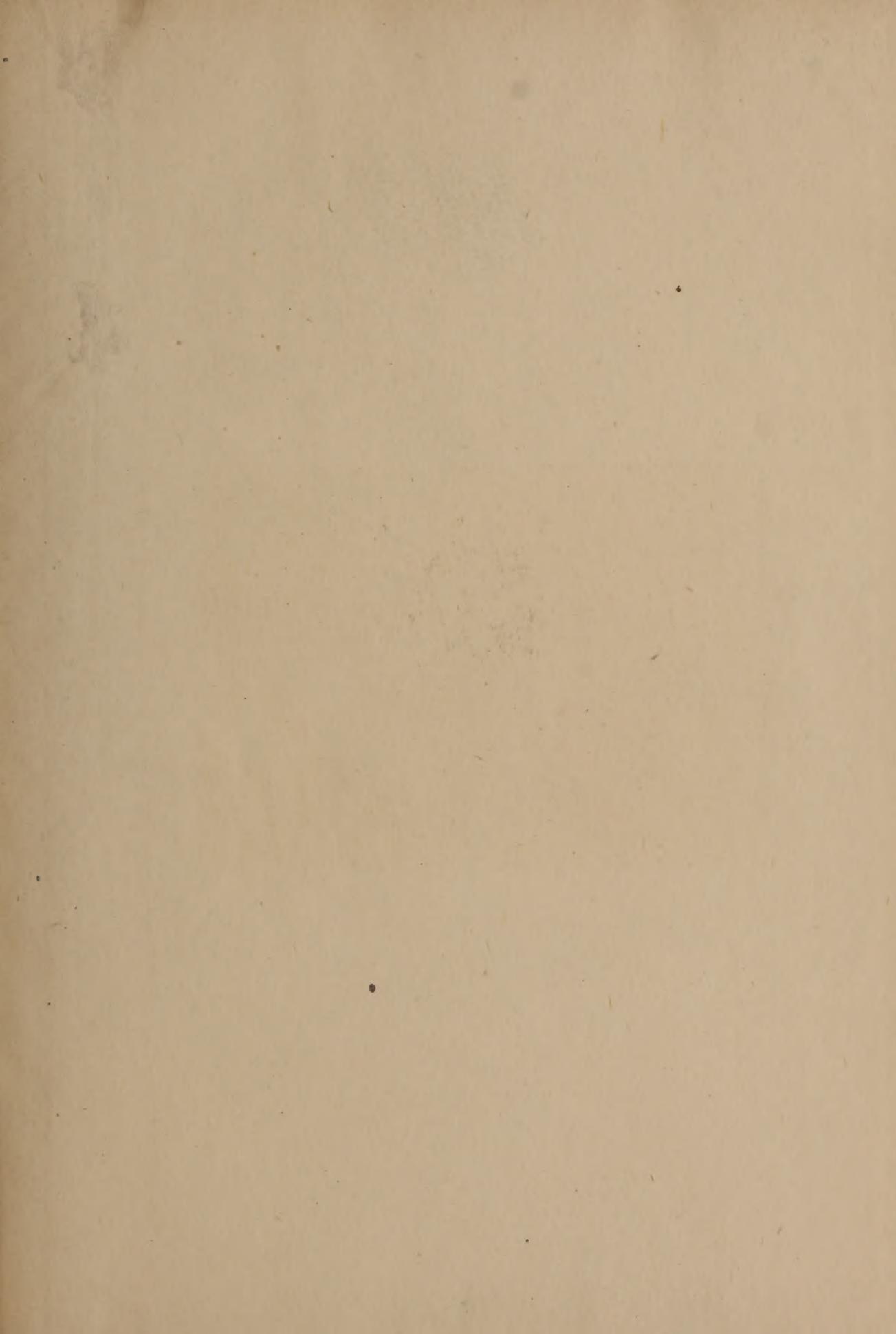
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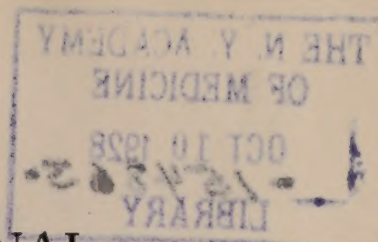
HENRY G. OHLS, M.D., Managing Editor



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JANUARY TO JUNE, 1928



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# INDEX TO VOLUME LIII

JANUARY TO JUNE, 1928

This is an alphabetical index of articles and discussions arranged by leading words. It contains occasional cross references. Names of authors and men who discussed the papers are also included. Details of society proceedings, including the titles of

papers read, officers elected, etc., can be located in proceedings under Societies, Editorials, News of the State, Marriages, Deaths. The subjects of editorials also appear alphabetically and are marked (E).

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# Illinois Medical Journal

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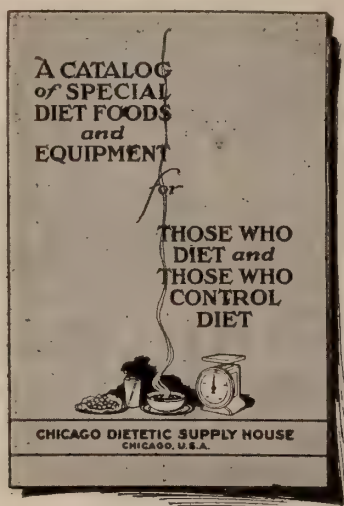


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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF  
THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LIII

OOK PARK, ILL., JANUARY, 1928

No. 1

## ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

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Send original articles, advertising copy, cuts, and all communications relating to advertising to Dr. Charles J. Whalen, c/o Illinois Medical Journal, 185 N. Wabash Ave., Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

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## Editorial

### ANOTHER YEAR OF PROGRESS

Physicians of Illinois confront a crucial year. The Editor of the JOURNAL wishes a happy and prosperous twelvemonth to all of his confreres and readers. But this prosperity and happiness will be a false treasure if the vital needs of the moment are neglected or overlooked.

So general has at least semi-luxurious living become that unless this republic is to falter and fall as did its Roman predecessor, attention must be paid to those abstract issues that are the very foundation of the concrete conditions that lead to material success.

No man, no profession, no science can afford to barter with a principle. Making friends with the mammon of iniquity may be pursued beyond the bounds of expediency into the fields of positive destruction. No longer can the medical profession regard with half-tolerance the strides made by lay dictators towards further abetting the construction of such a bureaucracy that not only the health welfare of the people, but the very constitution of the country will be shaken to its roots.

Menacing legislation such as the prohibition and drug control acts, the Sheppard-Towner law, the educational bill and various state adaptations of these and other federal interferences have the medical profession by the throat. State medicine is due to follow unless, as has been pointed out from the start by this JOURNAL, the profession ceases napping, realizes that Santa Claus is a figment of childhood days, and that facts must be faced and fought.

Realization of the conditions, the knowledge of what these conditions mean and the skill with which to make the combat one of triumph for science and civilization must be brought home immediately to every doctor, and to every undergraduate medical student in the country. It is not enough for district, city, county and state

medical societies to know of the dangers to humanity that lie in menacing legislation and lay dictation of medical practice, but there exists an increasing necessity for the junior medical man to realize just how vital is a combined front of ethical principles, in order that the science of medicine may continue to go on, and not to relapse into primitive discord.

Organization will enable the graduate medical profession to fight for its rights and for those of humanity through the ballot box. Instruction in these principles must be dwelt upon in our colleges. It is a sad thing to hear of a half-baked medical student taking up with the iniquitous profits of some cult or branch of quackery and bragging about his medical school affiliations.

This will be, as has been said, a year of crises. Each crisis brings in its train an opportunity. A new president is to be chosen and with this choice will come perhaps an entirely new set of law makers, and law enforcers, and law adjudicators. If the science of medicine had in the past stood up for its privileges and its rights, as such a science should have done, there would be no question as to what the statute books of the future might bring forth. A science of humanity, such as the medical profession, should lie far above the state. But does it? Ask the men who have to submit to some of the idiosyncrasies of lay dictation.

For the medical profession the year of 1928 can be and should be a "banner year." That it shall be such is the heartfelt wish of the editor. And such a year it can be, if even the busiest and most overworked doctor in the ranks will pause long enough in his zeal for his patients to give a thought and to spare some zeal for the profession itself.

This means more co-operation among the doctors in point of organization and of personal effort in this organization once it has been effected. For the sake of humanity, doctor, let us all stand together to lift our profession out of the clutches of lay dictation and bureaucratic control.

And once again, a happy and prosperous New Year to every reader, advertiser, and subscriber to the JOURNAL as well as to each physician who is one of the owners of this state periodical. The

JOURNAL has just had a most successful year. Let it be hoped that the coming twelve months will be even more prosperous than those that have just passed.

## NEXT ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY

*May 8 to 11, 1928*

NEW STEVENS HOTEL, CHICAGO

The seventy-eighth annual meeting of the Illinois State Medical Society will be held in Chicago, May 8 to 11, 1928, in the new Stevens Hotel, which is the largest hotel in the world. On account of the character of the conference this year, it is thought advisable to extend the time to four days instead of three days.

As a combination clinical and scientific session, clinics will be held at the new medical units of the University of Chicago, of Northwestern University, and of the University of Illinois, and at the Cook County Hospital. All scientific and general programs will be at the Stevens Hotel.

Exhibits will be at the hotel, including many scientific displays and demonstrations, as attractive features.

Invitations have been sent to the physicians of states adjoining Illinois, such as Michigan, Wisconsin, Iowa, Missouri and Indiana, all adjacent to Illinois, and this insures a record-breaking attendance. General hospital clinics will be arranged for both Monday, May 7, and Saturday, May 12, and during the session for a full week of clinics.

Officers of the five sections are anxious to get in touch immediately with members from both the Chicago Medical Society and the downstate societies who desire to read papers at the meeting.

Elsewhere in this issue is a preliminary outline of the program of some of the sections.

It will be noticed that the programs this year will be conducted somewhat differently from those of former years.

The seventy-eighth meeting should be the banner convention in the history of the State Society.



## DOCTORS WISHING TO READ PAPERS AT THE ANNUAL MEETING OF THE STATE SOCIETY QUALIFY AT ONCE

Any member of the State Society who wishes to present a paper before any of the sections at the annual meeting of the State Society that will be held at the Stevens Hotel, Chicago, May 8 to 11, 1928, is requested to communicate with the secretary of the section to which his subject belongs logically.

The section officers are as follows:

*Medicine:* J. L. Sherrick, Chairman, Monmouth.

N. S. Davis III, Secretary, 925 North Michigan Blvd., Chicago.

*Surgery:* J. R. Harger, Chairman, 25 East Washington St., Chicago.

Earl D. Wise, Secretary, Champaign.

*Eye, Ear, Nose and Throat:* C. F. Yerger, Chairman, 4458 West Madison Street, Chicago.

Walter Stevenson, Secretary, Quincy.

*Public Health and Hygiene:* A. A. Crooks, Chairman, Peoria.

E. W. Mosley, Secretary, 3325 Lincoln Avenue, Chicago.

*Radiology:* Harold Swanberg, Chairman, Quincy.

E. G. C. Williams, Secretary, Danville.

## MAKE HOTEL RESERVATIONS EARLY

The seventy-eighth annual meeting of the Illinois State Medical Society will be held at the Stevens Hotel, Chicago, May 8 to 11, 1928.

In anticipation of the largest and best meeting in the history of the Society, the committee on arrangements has inaugurated extensive preparations for the meeting and entertainment of visiting physicians and their families.

The committee on hotel accommodations urges that reservations for the meeting shall be made early.

The Stevens Hotel, Society Headquarters, Michigan Boulevard, between Seventh and Eighth Streets, Chicago, will house the scientific as well as the exhibition features of the meeting.

Reservations should be made directly with the Hotel Stevens.

Below is an outline of the cost of rooms and of meals at the Stevens.

### THE STEVENS ROOM RATES

Number of Rooms	Extra Value Without Extra Cost	
	Single Rate	Double Rate
263	\$ 3.50	\$ 5.00
1242	4.00	6.00
943	5.00	7.50
278	6.00	9.00
181	7.00	10.00
93	10.00	15.00

Fixed-price meals:

### JAPANESE LUNCH ROOM

Breakfast, 45c; luncheon, 65c; dinner, \$1.00.

### COLCHESTER GRILL AND OAK ROOM

Breakfast, 60c and 75c; luncheon, 85c; dinner, \$1.50; Sunday dinner, \$2.00.

### MAIN DINING ROOM

Luncheon, \$1.25; dinner, \$3.00 per person.

A la carte service is available in all restaurants at all meals.

## A FEW FACTS ABOUT THE STEVENS HOTEL

The Stevens Hotel, which will be convention headquarters of the Illinois State Medical Society, May 8 to 11, 1928, is the world's largest and greatest hotel, occupying the entire block on Michigan Boulevard between Seventh and Eighth Streets. The hotel overlooks Grant Park and Lake Michigan.

An investment of \$27,000,000 in ground, structures and surroundings is represented. There are 3,000 rooms each with bath, circulating ice water, closet, outside light and air.

The Stevens rises twenty-five stories above the ground with a four-story tower above and five basement levels below. Four entire floors are given over to public use and service. These contain dining rooms, restaurants, lobbies, lounge rooms, ball rooms and shops.

The Stevens is recognized as having the largest and most beautiful ball room in the world, equipped with motion picture screen and every facility for dinners, meetings, dances and spectacles, including a theatrical dimmer board by which every conceivable chromatic lighting effect can be produced.

There are seven ball rooms in The Stevens Hotel and nine private dining rooms with seating capacity from twenty-five to one hundred in each. One hundred rooms on the fourth floor can be used for committee meetings or displays and range in seating capacity from twenty-five to one hundred fifty persons.

The power plant of The Stevens is the largest privately owned utility of its kind in the world and

is equipped with generators capable of producing 3,200 electrical horsepower—sufficient for the industrial and domestic needs of a community of 60,000 people.

The Stevens has the world's largest check room with accommodations for 3,200 guests in addition to restaurant and various floor check rooms which furnish accommodations for several thousand more.

The house surgeon has a completely equipped two-ward hospital and operating room.

The Stevens has its own ice cream factory, its own laundries, its own candy factory, printing establishment and power plant. And also, it has a circulating library of 25,000 volumes.

The site alone cost \$6,000,000.

The carpets cost \$600,000.

Sixty carloads of mattresses are used in the hotel and four carloads of glassware.

The silverware filled three freight cars. The hollow-ware alone weighed 43,576 pounds.

A 101-foot reservoir stores water for bathing and drinking purposes.

From the roof garden promenade the cliffs and dunes of Michigan can be seen.

The lounge, carpeted with the three largest Saruk rugs in all the world, is furnished at a cost of more than \$200,000.

The grand ball room can seat 4,000 guests.

An army of 2,500 employees is necessary to keep up the service.

Fourteen passenger elevators carry an aggregate of 224 guests at a time.

The telephone switchboard system is capable of receiving and transmitting calls sufficient for a city of 15,000.

The refrigerating plant has a capacity of 300 tons of ice daily.

The ice cream factory can produce 120 gallons of ice cream an hour, while the candy factory can satisfy the appetites of 15,000 small boys.

During the first month of its operation a banquet was served to 4,700 people at one seating in record time.

The laundry, operated on a weekly schedule, could care for the wants of a community of 60,000 people.

---

#### COMMITTEE ON ARRANGEMENTS FOR 1928 ANNUAL MEETING

The Illinois State Medical Society should have in the annual meeting, at Chicago, May 8 to 11, 1928, the best meeting and the largest attendance that any State Medical Society has ever had. Plans have been under way for several months. In order that they may be carried out to the best advantage, each member of the Society should cooperate with the committee on arrangements, and the officers of the Society. The committee on arrangements is here given:

Nathan S. Davis, III, 952 North Michigan Blvd., Chicago. General Chairman.



Stevens Hotel, Headquarters for the 1928 Annual Meeting of State Society



G. Henry Mundt, 25 East Washington Street, Chicago. Ex-officio member.

A. G. Bosler, 720 West 61st Street, Chicago. Ex-officio member.

R. R. Ferguson, 4175 Irving Park Blvd., Chicago. Chairman of Publicity Committee.

J. S. Nagel, 25 East Washington Street, Chicago. Ex-officio member.

S. J. McNeill, 4802 North Robey Street, Chicago. Ex-officio member.

Frank R. Morton, 910 South Michigan Ave., Chicago. Chairman, Committee on Meeting Places.

Irving S. Cutter, 303 East Chicago Ave., Chicago. Chairman, Committee on Clinical Section Meetings.

P. H. Kreuscher, 30 North Michigan Ave., Chicago. Chairman, Committee on Pre and Post Session Clinics.

William S. Bougher, 6706 South Green St., Chicago. Chairman, Committee on Information and Hotels.

I. A. Abt, 104 South Michigan Ave., Chicago. Chairman, Committee on President's Dinner.

Harry M. Hedge, 30 North Michigan Ave., Chicago. Chairman, Entertainment Committee.

H. G. Wells, 1233 East 56th Street, Chicago. Chairman, Committee on Scientific Exhibits.

Emmet Keating, 2758 Fullerton Ave., Chicago. Chairman, Committee on Registration.

W. A. Pusey, 7 West Madison Street, Chicago. Treasurer, Committee on Arrangements.

W. H. Holmes, 30 North Michigan Ave., Chicago. Secretary, Committee on Arrangements.

F. O. Frederickson, 4700 Sheridan Road, Chicago. Chairman, Committee on Commercial Exhibits.

Members of the Society having suggestions of interest, are requested to report these to the respective chairmen, or to the General-Chairman. Such suggestions will be carefully considered, towards an effective handling of the program.

#### TENTATIVE SCHEDULE SECTION ON MEDICINE, ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

At the meeting of the Illinois State Medical Society, May 8 to 11, 1928, there are to be two scientific programs of the Section on Medicine, one Tuesday afternoon, May 8, and one Friday

morning, May 11, which are to be held at the Stevens Hotel. There are to be five clinical meetings of the Section: Wednesday morning at Northwestern University Medical School, Wednesday afternoon at the University of Chicago Medical School on the Midway, Thursday morning at the Cook County Hospital, Thursday afternoon at the University of Illinois Research and Educational Hospital, and Friday afternoon at the Loyola University Medical School Clinic at Mercy Hospital. The programs of the clinical section meetings are to be presented by the university faculties and hospital staff members. It is the desire of your secretary to have the scientific programs presented by members of the Society who do not belong to the Chicago Medical Society, excepting those given by the Section's guests who are to be Dr. Fred M. Smith of Iowa City and Dr. Charles P. Emerson of Indianapolis. There will be eight or ten papers presented before the Section in addition to these two and each paper will be limited to 20 minutes. To date, your secretary has received but two requests to present papers from men not members of the Chicago Medical Society and eight or ten from members of the Chicago Medical Society.

Will members of the Section kindly communicate at once with the secretary, N. S. Davis III, 953 N. Michigan Ave., Chicago, if they wish to present papers? Papers on neurology and psychiatry, pediatrics, dermatology and the medical aspects of pregnancy and the puerperium are especially requested, as there are no separate sections for those subjects, in addition to papers on internal medicine.

---

#### PROGRAM OF THE SECTION ON EYE, EAR, NOSE AND THROAT, ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

Monday, May 7, 1928—Morning and afternoon, hospital clinics; evening, Eye, Ear, Nose and Throat Section banquet.

Tuesday, May 8, 1928—Morning and afternoon, hospital clinics; evening, general open meeting.

Wednesday, May 9, 1928—Morning and afternoon, scientific program; evening, president's banquet oration on surgery; stag.



Thursday, May 10, 1928—Morning, University of Chicago; 5 P. M., oration on medicine; evening, college and class reunions.

Friday, May 11, 1928—Morning and afternoon, Northwestern University.

Saturday, May 12, 1928—Morning and afternoon, University of Illinois.

### PRELIMINARY PROGRAM

SURGICAL SECTION, ILLINOIS STATE MEDICAL SOCIETY, May 8 to 11, 1928

Chicago members will be limited to clinical demonstrations as provided for below:

Downstate members will have the privilege of furnishing all the didactic papers except the two invited guests.

Members will be afforded an opportunity of inspecting the great medical institutions on the days when each furnishes the clinical demonstrations.

Tuesday, May 8: Afternoon: Reading of papers at hotel.

Wednesday, May 9: Morning: Reading of papers at hotel.

Afternoon: Northwestern University clinical demonstrations by members of the faculty.

Thursday, May 10: Morning: University of Illinois clinical demonstrations by members of faculty.

Afternoon: Cook County Hospital Clinical demonstrations by members of staff.

Friday, May 11: Morning: University of Chicago clinic demonstrations by faculty.

Afternoon: Loyola University at Mercy Hospital by members of staff.

### SYMPOSIUMS REFLECT PROGRESS IN MEDICAL CIRCLES

An excellent plan for epitomizing the various avenues of annual progress traversed by state and county societies comes to this office from Dr. Harold N. Camp of Monmouth, Ill., Secretary of the Illinois State Medical Society. Dr. Camp suggests annual publication of a symposium of reports of work done during the past year and made up from comments prepared by the various committees, officers and departments of the state society, and from the county and district societies. Such a review of the work, including deaths, marriages, new members, re-

movals, and similar vital statistics and personalities and professional data would be of undoubted interest and assistance. Especially would such interest attach to the work of the Educational, and of the Scientific Service committee.

In this issue are printed the reports of this nature that had been received in time for publication.

This is only the inauguration of the idea and probably by next January it will have been so perfected that a fuller representation can be had.

### GEORGE HENRY MUNDT

President of The Illinois State Medical Society

In looking over the history of the Illinois State Medical Society I am impressed with the great service our organization has been to the profession, as well as to the general public. Space hardly suffices to analyze the above statement but "Your State Medical Society" has been a great agency of progress.

The Illinois State Medical Society is the third largest state medical society in the country. One of its component units, the Chicago Medical Society, is the largest local medical society in the world. The membership in proportion to the physicians in the state is larger than in any other state in the union. These facts should be very gratifying to all of us and should spur us on to better and greater things.

Numerical strength is important, however, not nearly so important as is service, and the Illinois State Medical Society stands well in the fore in service to the profession and to the public.

Since the unit of the Illinois State Medical Society is the county medical society it is obviously necessary for each county medical society to function at the highest possible point if we are to perfect our organization as we should. Every eligible physician in Illinois should be a member of his county medical society. Though this may not be possible of exact attainment, the effort should be made. More important than one hundred percent membership is that the county medical society shall present attractive programs, that the membership attend the meetings, *and that the county medical society take its proper place as the di-*

rector of all health activities in the county. One of the most important things a county medical society could do to place itself favorably before the public is to have publicity in the local press given to all of their meetings and activities. "It is the duty of every man to devote a portion of his time to the advancement of the profession of which he is a member."

To sum up in a few words, the medical men in Illinois must remember they are a unit of a great profession; that the contact of the profession with the great body politic must be through the organization; it is every physician's duty to do everything in his or her power to advance organized medicine, both from the professional and from the economic standpoint.

I deem it no small honor to have the privilege of addressing the Illinois State Medical Society at the beginning of what will doubtless be its most important year from the standpoint of service.

---

#### JOHN E. TUITE

President-Elect of the Illinois State Medical Society

This is the season for well-wishing. Probably convention has robbed this graceful custom of much of its meaning. But when men are engaged in serious and important work, it is not difficult to give special significance to the time honored greetings. That you, the members of the Illinois State Medical Society, may find yourselves happy in all your endeavors during the year, I wish most heartily. But to make my wish more definite and concrete, let me hope that there will be added to your duties lively interest in the County and State Medical organizations.

Sound action results from sound thinking—an old axiom. Adverse criticism of the County Society when one has shirked his individual responsibility to the organization, is not sound thinking. Self-indictment is generally a healthy exercise, and as all groups are composed of individuals the sum total of whose virtues give character to the group, it is ourselves as individuals who are at fault when the local society fails to function adequately. To begin with then, the cultivation of individual membership responsibility is a consummation which we may devoutly desire.

Translating that idea into action, the program

is plainly indicated. First, attend the meetings. This will help you to realize that on the small investment of your time together with your membership fee, you actually get splendid returns.

You come into friendly and sympathetic contact with your neighbors in the profession and profit by their experience.

Automatically you become a member of the best, and one of the largest and positively the most influential State Society in the land.

You have the advantage of the most efficient medico-legal protection obtainable. This is of inestimable value. In a world of sharp dealing, we need protection, not only for protection sake, but as a prophylactic against blackmail.

Into your office once a month comes the JOURNAL of the Illinois State Medical Society, and it is no mere gesture of silly praise to say that it is the best edited medical journal in America.

To the wish that we may all be stimulated to better membership responsibility in the County Society, we will add a corollary. Let us take a live interest in the work of the Educational Committee. Enthusiasm for this department will inevitably grow upon acquaintance with its achievements.

One more wish I have but it scarcely needs mention because if these foregoing desires are realized this last will "click" quite smoothly, and there will be 5,000 of us at the Stevens Hotel in Chicago next May to enjoy the program now in preparation by our president, and his committees and the committees appointed by the Chicago Medical Society.

We live in an age of organization, of exchange of opinion and experience, of cooperation. Nineteen twenty-eight opens. Let us here highly resolve to "act our age."

---

#### WILLIAM D. CHAPMAN

Chairman of the Council of the Illinois State Medical Society, Silvis, Ill.

The Council of the Illinois State Medical Society wishes a most happy and prosperous new year to each member of the organization.

Prayers without labor are futile. To attain the millennium one must work for it. Bit by bit is an ambition achieved. Assembling by piece work is a logical accomplishment. Work



brings content. And it follows that those who would be happiest should invest the maximum of effort towards the most altruistic end. Practicing this preachment, the council pledges again to foster and to encourage all individual effort that will tend to bring the best of material and ethical advantages to the profession, its members, and the state organization.

Members of the council take pride and pleasure in that co-ordination that distinguishes the activities of the work-committees and agents of the Illinois State Medical Society at the outset of a new year. The Council's aim for each of its meetings during the year, is to serve the state society through the directorship vested in this body, all members to their fullest professional and economic advantage. That aim can be attained best by the council when all members shall have come to believe that the council is theirs to make use of, and that every properly registered suggestion, complaint, grievance or idea is welcomed by the council so that it can assist, or adjust the matter. To your council, few things are sacred and all else is grist. Tolerance is our shibboleth. Co-operation is our hope; labor our deliverance and enlightenment, our ambition. To members who subscribe, and to members who dissent—Happy New Year!

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#### HAROLD M. CAMP

Secretary Illinois State Medical Society

The Secretary wishes to thank the component society secretaries for the spirit of cooperation shown during the year which has just closed. At the beginning of 1927 the total membership was 7,274. At the close of the year it was approximately 7,400, a gain of members during the year. We have lost slightly more than 100 members by death and about 50 by removal elsewhere, so the actual number of new members taken in during the year was nearly 300. Each department and committee of the Society functioned satisfactorily during the past year. More and better work has been done during the year 1927 than ever before.

In order that our cooperation with the component societies may be more nearly what it should be, here are a few suggestions to the many secretaries. The by-laws of the society state that the annual dues are due on January

1. Members who have not paid by April 15 are not in good standing, although they are carried until December 31, when, if the dues are not paid they are automatically removed from the membership list. Unfortunately there are a few County Societies who do not send in their annual report until the close of the year, and occasionally not until the early part of the following year. This is very confusing and may cause the members to lose their right to Fellowship in the American Medical Association.

County Secretaries should collect their per capita assessments as early in the year as possible. They should send in a monthly report to the secretary's office with the remittances. All resignations, removals and deaths should be reported promptly, and notification of members who have been suspended. A card is kept for each member and whenever a remittance is received it is credited on the cards of the respective members for whom the remittances are sent in. A supply of these cards will gladly be sent to any County Society caring to adopt this system, and it will insure State records being uniform at all times. When members have been dropped for non-payment of dues, such can only be reinstated on State records by sending in remittances for the delinquent year and also for the current year. Failure to observe this ruling often causes confusion as occasionally a County Secretary will send a remittance for a member who has been dropped and ask that such member be credited for the current year instead of the delinquent year.

The Secretary wishes to assure all component society secretaries that it is his desire to cooperate as thoroughly as possible during 1928, and that is why the new year greeting is so exceedingly informative. He also wishes a happy and prosperous New Year to the entire membership of the Illinois State Medical Society, as well as to the County Secretaries.

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#### J. R. BALLENGER

Chairman of the Medico-Legal Committee

Much success and happiness and the onus of no unjust malpractice suits is the wish for the New Year that is sent to the Illinois State Medical Society by the Medico-Legal Committee.

And, as a fillip of encouragement, the Medico-



Legal committee reports that during the last sixty-day period of 1927 there were no new suits filed in Cook County. This is a record and the committee's hope is that this record shall hold during 1928. To those doctors who are made the target of such legal action, the committee offers in all good heart to do the greater part of the worrying. It is well to remember that many a suit for malpractice is the result of an unthinking yet unkind comment dropped casually about a neighbor. This admonition brings with it the suggestion that in our relations with other physicians we should have more charity for all, and follow the Scriptural injunction "Settest thou a seal upon thy tongue."

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#### R. R. FERGUSON

Chairman Educational Committee Illinois State Medical Society

The Educational Committee is fast emerging from obscurity and occupies a commanding place among the activities of the Illinois State Medical Society. Your Committee extends greetings to each member of the Society, and especial greetings to those who have served the Committee and the Society in one way or another during the past year. Our next year promises to surpass anything yet undertaken in an educational way by any state medical society in the United States.

Out of the annual dues paid by each member of the Society the appropriation to the educational committee will be stretched to the utmost purchasing limit this coming year. Last year's record of the expenditure of the \$1.74 that is the sum appropriated to this committee resulted in 550 Physicians (almost two each day) have spoken before different clubs in Illinois, 135 Radio Talks have been made during the year reaching thousand of people, 3,656 news articles (70 per week) were released to 60 Illinois papers, 102 films were shown to lay groups.

County Societies are using our scientific service material to great advantage.

Ninety Counties were given direct service. We hope to reach the other twelve this year.

HAPPY NEW YEAR TO EVERY MEMBER  
OF THE STATE SOCIETY FROM THE  
EDUCATIONAL COMMITTEE

#### JEAN McARTHUR

Secretary, Educational Committee

The work of the Educational Committee has been fivefold during 1927, and an attempt has been made to strengthen these five departments in every way possible rather than to put across any spectacular features. Continuance of this program will be made during 1928.

The Educational Committee emphasizes two statements—"consult your family physician," and "have a periodic health examination."

The work of the Committee may be classified under the following departments:

*Speakers' Bureau*—550 physicians spoke before clubs in Illinois during the year 1927.

Lay organizations are turning more and more to the Illinois State Medical Society for speakers on health subjects. Groups that have never made use of this speakers' bureau are being gradually reached and almost every month a request has come from some "new" organization. Thousands of people have been reached by physicians who have given their time for this educational work. During 1927 an average of approximately two lay groups each day were given health programs through the Educational Committee.

The Committee has attempted for several months to interest the superintendents and principals of schools in the state to have health talks given before the student bodies. The reaction has been most worth while and not only have the Chicago schools shown an interest by arranging for periods when physicians might give health lectures, but several of the downstate principals are arranging for regular series of talks to be given during the winter. In some instances these lectures are being illustrated with moving pictures.

The Committee hopes to arrange a health day program for every woman's club in Illinois during 1928. Several are already scheduled.

*Radio Talks*—135 radio talks were given. Believing that the radio is one of the great avenues for influencing the public, the Educational Committee made contact with several of the larger stations in Chicago, with the result that every Tuesday morning at 11:50 talks were given over

WGN and occasional series were given over WJJD, WLS, and WMAQ.

*Press Service*—3,656 news articles were released to Illinois newspapers.

On December 31 about 60 newspapers in the state were using as a regular weekly feature the health column furnished by the Educational Committee and published over the signature of the local county medical society. An endeavor is always made to send educational articles to papers in communities where certain diseases are prevalent. It has been found that the editors are appreciative of this service.

Publicity is handled through the office for special medical meetings. These articles are live "news" and the editors have been glad to give the public the announcements.

All articles were censored by the Committee and in most cases by some physician in the local community.

*General Health Education*—102 films were ordered for lay groups.

Health pamphlets were ordered from the State Department of Public Health for distribution to clubs.

Poster exhibits were sent to County Medical Societies, who arranged to have them shown to the public.

*Scientific Service*—Through this subcommittee of the Educational Committee speakers were scheduled to give scientific programs for county medical societies. Demonstrations of complete physical examinations were given at the Drake Dental Clinic held last January.

*Cooperation with Other Agencies*—Cooperation has been given to various projects of the State Dental Society, the Federation of Women's Clubs, the State Department of Health, the Parent-Teacher Associations and the Chicago Council of Jewish Women.

The Educational Committee believes in preventive medicine and that "knowledge is without influence until it is given to the public. It is without power until the public accepts it."

It believes in the pre-school child examination and the periodic health examination and that these can best be given by the family physician in his private office.

Ninety counties of Illinois were given direct service. All counties were furnished some indirect service through the newspapers.

## BIGGER FAMILIES AND BETTER FAMILIES ARE SYNONYMOUS

NEW ENGLAND'S TRIBUTE TO THE ANTI-CONTRACEPTIVISTS COMES STRAIGHT FROM THE HOME OF OLD ELI

The Chicago Crime Commission and Yale University appear to be at one on the question of promiscuous contraceptive education as advocated by the exponents of birth control.

Dr. Ellsworth Huntington, research associate at Yale, comments that from a survey of results taken with Yale graduates "bigger families and better families are synonymous."

This statement corroborates the findings made several years ago when the Chicago Crime Commission discovered that the majority of the prostitutes whom they interviewed for statistical purposes had come from limited family homes. In fact, the average prostitute had been either "an only child" or with merely one or two other children in the household from which she had come.

Dr. Ellsworth Huntington's article that appeared under date of Nov. 28, 1927, in the *New York Herald-Tribune* and that had been quoted from the *Yale Scientific Review*, deserves careful study.

"The successful man is the man who is of the most value in making the community a better place in which to live," Dr. Huntington defines. Investigating the subsequent careers of 1,700 graduates from Yale University whose classes took their sheepskins from their alma mater many years ago, he chose as his subjects "men whose positions in life were assured, and whose families in most cases were complete. The findings prove:

1. "The most successful men are married in much larger proportions than the least successful.
2. "The most successful tend to marry somewhat earlier than the least successful.
3. "Among the most successful tenth, no less than eighty per cent. have children, whereas among the least successful tenth, this average falls to forty per cent."

To the query made to Dr. Huntington, "But what about the children in the larger families?" his reply included these statements:

1. "From a group of 1,700 men who had been graduated from Yale University during the period extending through 1922-6 the classroom work for the entire four years of college shows a



well-nigh perfect gradation from relatively low marks to a fairly high average. *The low marks came almost without exception* from those who were the only children of their parents, and the better grades from those who were one of a family of six or more children."

2. "Students who had from five brothers or sisters up decidedly excel students from smaller families in point of excellence in literary, dramatic, religious and musical activities as well as in such executive tasks as student government, athletic team management and the like.

3. "Star athletes usually come from the larger families."

All of which, as well as other facts, evolved and deduced, are cited by Dr. Huntington as evidence beyond cavil that probably everywhere, and undoubtedly in so far as Yale graduates are concerned, "That popular notion that children are benefited when families are limited to two is completely wrong. The bigger the family, the more likely a boy is to succeed in college."

## THE NURSING SITUATION AS SEEN FROM MANY VIEW POINTS

### AN UNTOWARD FEATURE IN THE APPROACHING PRICES OF OVER STANDARDIZATION IN THE CARE OF THE SICK

#### THE MODERN OVERTAINED NURSE IS BECOMING A GENUINE OLD MAN OF THE SEA

An inverse ratio of science, skill and knowledge as against overstandardization and false analysis of the premise of relative importance in their respective bearing upon public recognition and material compensation is an immediate problem demanding an immediate solution at the hands of the medical profession, because of a looming impasse in the nursing situation.

Not only is the nursing profession running away with itself but it is beginning to show signs of dragging to an unwholesome end, both its value to the medical profession and to the community health.

For of all the dangerous symptoms forecasting a possible debacle of the public health, and starkly confronting the medical profession and the national economists, there is none more menacing than that of the over-trained, superlatively-expensive nurse, who is perhaps the most salient and untoward feature in the ap-

proaching crisis of overstandardization in the care of the sick.

Instead of an ever present aid, both to the physician and to the sick—a subsidiary complement to the skill and wisdom of the one, and a fulcrum of hope and help to the other, the modern over-trained nurse is becoming a genuine Old Man of the Sea. Save in the case of an exceedingly small proportion of exceptional cases demanding the high fees of specialists, not only does the remuneration demanded by the nurse from the patient exceed that of the physician, by grace of knowledge and wisdom her professional superior, but it is too great a luxury for any but the very wealthy to be able to afford. Further this financial exaltation of the over-trained nurse has made of her, in only too many instances, one of the bugbears of the sick room to doctor and to patient both. No section boss can rule more despotically in any case.

Insidiously indeed has the tail learned how to wag the dog in this instance. Doctors have been so busy trying to make sick people well, and with the alleviation of illness, or its cure, the main intent of the medical profession, whether as unit or an individual, the profession has been lax in its survey of the trend of the nursing profession.

To put it plainly, the sick man can't get a nurse half the time, and when he can, he can't afford to pay her. Sometimes according to the new "shift rules," what is demanded by nurse in the way of salary, added to personal maintenance, and when the housekeeper happens to be an invalid, the additional wage of a worker to "wait on the nurse," makes the sum total an impossible amount.

With surprise and shock the medical profession finds itself brought up short by the nursing situation.

Propagandists for the lay dictation of the practice of medicine find the nursing profession a facile entrance for their schemes—unwittingly perhaps, yet actually so. Through the ever increasing demands of the nursing profession, the average American citizen finds himself unable any more to pay for proper care for himself and for his family, in his home, and during the ordinary illnesses of daily life. This is all leading to but one end, hospitalization for illnesses so trivial comparatively speaking, or else no



care for the sick. That this ultimate hospitalization is not desirable is cited by no less an authority than Dr. Charles H. Mayo who declares that fully ninety per cent of all sickness does not require hospitalization. In many illnesses a trained nurse and a hospital may be a necessity and certainly life is a thing to be saved at any price. Nor does the labor of the nursing profession go underestimated in the eyes of the doctors. It has simply become a question of humanity and of justice, and of striking the balance fairly.

If nursing conditions are such that a nurse under present training regimes must have her fifty dollars a week, or even forty, say, and work in relays with at least one and perhaps two other nurses each of whom receives also \$50 per week, and at least a portion of her maintenance from the family of the invalid, then it is a dead open and shut proposition that the invalid is going to get along without any trained nurse. It is also an obvious truth that the physician in charge of this case is not going to receive any \$150 per week and any part of his maintenance to cure the man. Yet when it comes to a question of skill, there is no question.

This ever increase in scale of wage and decrease in responsibility and in shared labor has led to a sad state of affairs with a large proportion of the nursing personnel. Not having enough nursing to do to keep her busy, many and many a nurse arrogates to herself the discretion and direction supposed to rest with the physician and many and many a doctor has had to fight his case slipping out of his hands into that of the nurse. Just why a patient should seem to think a nurse knows more than a doctor it would be difficult to analyze. But there is a naive psychological appeal in the phrase uttered consciously or unconsciously by many a nurse, "Well, doctors don't always know and they don't always agree themselves and I had a patient, who wasn't getting along at all, etc., etc."

Every doctor knows that story.

There would appear to be light in the darkness for both doctor and patient in the entire re-organization of the nursing profession. For those who wish to be the super trained members of one of the oldest and most honorable as well as fundamentally self-sacrificing professions, let the long expensive course with the institutional directorship, the position with a wealthy chronic,

the research work or the especial aide to some high feed physician as the goal, stand as it is. But there should be a middle road; some course, some way so that there would be the return to the field of the nurse, capable, willing, trained to be a nurse and not a *mock-doctor*, who will work from \$20 to \$30 a week, a sum, that while comparatively modest is even yet more than many a family can pay. More than one family rears its children, keeps its home going and stands as a model of good citizenry through the years on an income that never exceeds from \$30 to \$50 per week. These are the homes, too of native stock, with democratic ideals, inherent fastidiousness—in fact the backbone of the United States. To such a family the idea of a nurse at \$50 per week, her food, lodging and all the rest of it is like asking a blind man to read out of an ordinary pocket size dictionary. Only a miracle can do the job.

Nor are all the cases where a nurse is required in a family terrible chores. Some cases need a nurse to give skilled attention, yet light attention, only for a brief time each day. Frankly the work in these instances is not worth the price asked. Contagious disease cases may need a highly trained woman. But almost any doctor will say that he would rather have an untrained nurse who will carry out his directions than an overtrained nurse who thinks she knows more about the case than any dozen doctors who ever prescribed a pill, or made an urinalysis.

#### NURSING SERVICE IN HOSPITALS

The situation in the hospitals for the poor patient is not much better than it is in the home. Having become a nation of neurasthenics, modern hospitals are, for the wealthy, palaces of the sybarites. A man goes to the hospital, and he is lucky if he gets his board and room for \$35 per week. His nurse will be charged to him at from six to eight dollars per diem and per nurse, and he has to pay at least \$10.00 for the nurse's board too, unless she is a "probationer." Altogether, in the parlance of the proscenium the situation "does not click."

The unfortunate part of all this is that the results are going to be just as bad as possible for the medical skill of the future and even worse than seems probable for the nursing profession unless a halt is called without delay, and a detour made away from this path that is going

to lead the nursing profession straight into a cocked hat.

Under present economic conditions the average American family can finance only one or at most two weeks of sickness. In sickness as in other every day problems people follow the line of least resistance. When men can't buy food, they steal it. When men can't pay their bills they go to the public institutions maintained at the expense of the taxpayers. Nothing in life is free. And just about one of the quickest ways in which state medicine, complete bureaucratic control of the sick, and a few other devastating, over expensive, socialistic and un-American institutions are going to be deposited upon the people of the United States is through community payment for the care of the sick. Yet that is exactly what is going to happen and that within a very few years unless the nursing situation takes a cheerful right-about-face!

Lay dictation of medicine is working through the nursing profession. The nurse is set above the doctor with about as much rational judgment as if national government were put into the hands of the adolescents. True, the nursing profession by these very tactics is digging a pit into which it will fall itself eventually, but the descent will be made at the expense of the public health and through the withdrawal of the medical profession.

If even a few members of every county society would investigate thoroughly what the over trained nurse is doing at the lay sponsored clinics and in many of the lay public health movements, and "uplift campaigns" there is not a doubt in the world but what every county society upon getting the reports of its investigators would sit in-council and get to work. Results of this consultation and labor would inject certain relief into the present unbearable situation. Sporadic movements to this end are springing up all over the country. These should be consolidated and organized. Fire can be used to destroy fire and if the medical profession must resort to bureaucracy to save the public health, then let the profession remember that the public health is a time honored trust of the medical profession, even in the midst of the most primitive tribes.

*How many physicians know that within the last six weeks a bold attempt was made through a purposed scheme to deliver the entire hospital*

*system of Cook County, tied, gagged, and doped, into the hands of the nursing profession? That such a scheme, had it gone through, would have made everybody connected with this system from physicians and patients down to cooks and engineers under the czaristic thumb of a trained nurse whose discretion of medical treatment, surgical disposal, diet, and all other routine matters would have been absolute?*

*The scheme was nipped in the bud. Why? A few doctors got wind of it and took action. In five years where would the sick poor of Cook County have been under such conditions? It was a master and well masked scheme but for the time at least it is thwarted.*

The medical profession realizes its debt to the nursing profession. So do the sick. But this is a country of overindulged and spoiled children, trained to demand rather than to give and a few of the pampered and subsidiary professions are acting like such a bunch of youngsters. "Necessity knows no law" as well as being the "mother of invention" and it is up to the medical profession right now to invent some way of getting adequate care at reasonable rates from capable, responsible nurses for the mass of average sick. It can be done, it must be done, it will be done. So far the nurses themselves have failed to show any signs that their profession realizes its weak spot—the weakness that will be its undoing and leave the ranks of overtrained, dictatorial nurses hoist by their own petard and unable to proceed longer with their *mock-practice of medicine*.

#### VIEWS OF OTHER WRITERS

Dr. M. L. Harris has spoken pertinently of the situation in a recent article in the *Journal A. M. A.* Says Dr. Harris in part:

"Hospital management is being dominated more and more by laymen who fail to understand and appreciate the professional side of the situation. Lay boards of trustees of hospitals are beginning to think that every patient who enters a hospital belongs to the hospital and that it is the duty of the board to determine who shall take care of him. The attitude of the lay superintendent of a hospital is well shown in a recent article that appeared in the daily press of one of our large cities, in which he said, "Physicians are necessary adjuncts to a hospital, but they should have nothing to say in regard to who their confrères should be." Now an adjunct is "that which is joined to something, but is not an essential part of it." Is it not interesting to know that doctors are not an essential part of a hospital and that they haven't sense enough to determine whom they shall



work with, or to have anything to say about the hospital management? I am not at all in accord with this idea. I believe that medical men should predominate in the management of every hospital, and furthermore I believe that there are doctors who have business sense enough to undertake the work. The hospital is the physician's workshop, and when a workman ceases to have something to say about the management of his shop he has failed."

From these "laymen dominated hospitals" come the annual crop of presumptuous, physician dominating, overtrained nurses. Not all of course, but a large proportion of them. In their eyes a hospital is less a sanctuary for the sick, than a fine modern hotel with the modern improvement of de luxe medical attention.

A recent copy of the *Journal of the Indiana State Medical Association* remarks about the nursing situation.

"It may be that the city dwellers in flats, where a three or four-room apartment has to do service for eating, sleeping, bridge, radio and entertainment of all sorts, are almost forced through lack of house room and conveniences to go to a hospital when sick, but for the most of those belonging to the great middle class, in Indiana for instance, such an emergency is not as common. It probably is also true that a large number of people who could be taken care of in their homes when sick are encouraged by the attending physician to go to a hospital, not because of real necessity but because of the convenience to the physician himself.

"We recognize that in severe illness the hospital and even a trained nurse may be a necessity, but for eighty to ninety per cent of the illness afflicting mankind neither a hospital nor a trained nurse are an absolute necessity but must be classed as a luxury, and to those in moderate circumstances such a luxury requires a financial outlay that is a great hardship. Sickness becomes, therefore, an economic problem for the great middle self-supporting class, or perhaps we should say for those earning salaries not to exceed two to five thousand dollars per year. In fact, many a family has been financially embarrassed for a long period of time as a result of superfluous and unnecessary money outlay in case of sickness.

"Last but not least, the physician suffers, for the bulk of his work is for people belonging to the middle class, and he is the last to be paid and oftentimes is not paid at all if his patient has been financially drained by the extravagant expenditure of money for hospitalization and nursing. The problem is a serious one, as must be admitted and the answer is not arrived at by having a part or all of the expense borne by federal, state, or municipal taxation and with services largely or wholly donated. In fact, pauperization of people from too much gratuitous service of any kind spells disaster in our body politic. The deserving poor can be and are cared for through charity, either public or private, but how to take

care of sickness in the self-supporting without making it unduly burdensome or causing the recipients to lose self-respect is a real problem. The question must be solved by greater discrimination on the part of both patient and physician in the decision to seek hospitalization and expert nursing care. The attending physician will do a great deal toward effecting economy for his patient and at the same time making it more possible for himself to secure adequate compensation for his services if he discourages hospitalization for the ordinary illness, and likewise discourages the employment of highly trained nurses at large expense in any cases except those plainly indicating the need for such attention."

So integral an unit of national educational life and economic wisdom as Yale University has already taken a step in the right direction. The elms of Old Eli are already looking down upon an experimental school for the training of a less expensive, less luxurious group of nurses.

And out of the west comes the echo in *Wyoming Medicine* crying:

"Have we not allowed the nursing profession to be carried by a few highbrows to the point where the average family cannot afford their overtrained services?

"There is a place in our present day civilization for the highest order of training in every line of life, but just as the average family cannot afford to own a Rolls Royce, so there is a need, and a very pressing one, for a three-dollar-a-day nurse.

"We grant that the present-day highly trained nurse is worth what she is asking to families who can afford it, but how about the other three-fourths that need and can only pay for a three-dollar-a-day nurse?

"It is not exaggeration to say that many, many times the nurse's pay is greater than that of the physician under whose orders she is working.

"The present tendency can lead to a close union demanding eight hours a day service and a minimum pay of \$50 per week or more with board and laundry.

"It is time to call a halt. Not only in the interest of the physician, and his patient, but also for the good of the nursing profession. A few leaders are so blind to their own welfare that the false standards are being raised all out of reason.

"What is needed is a nurse that the ordinary family can afford to hire. Such a nurse can be produced by one and a half year's training in any good hospital. If, after she has graduated she wishes to become a hospital supervisor or a special operating room nurse or an assistant to some specialty, let her take the additional training.

"Let her training consist in the common things of life. Above all she should possess common sense before she is admitted to training. Her training should increase her feelings of sympathy and agreeableness rather than to try to develop the idea of a super-being. She ought to be an administering angel of the sick room.



"Such a woman would be a godsend with her three dollars a day, board, room, laundry and our good will."

In conclusion let quotation be made from the ILLINOIS MEDICAL JOURNAL of January, 1921, when even so far back as six years ago the nursing profession was bolting away from scientific, humane and par consequence ethical standards in some of its activities, notably that of industrial nurses illegally practicing medicine. "There are nurses who believe themselves to be adequate when they are not," commented the JOURNAL in an effort to be fair, but added "it is the trusting innocent that is the ultimate sufferer and his protection is a rigid enforcement of the laws covering medical practice."

There are no laws in medical practice anywhere that permit a nurse to arrogate to herself more God given rights than the human discretion gained by a physician only after years of study and practice. That same month the *Indiana Medical Journal* had this to say of the encroaching

#### "NURSING BY TRADE UNION METHODS"

"No person can afford to be sick but the average family is almost bankrupt when it has to pay a trained nurse at the present rate of fifty dollars a week and board, and the doctor's fee.

"The worst of it all is that many trained nurses are not rendering the services they should render. They are acquiring the attitude of so many laborers in trying to get the highest compensation and to give the least return for it. . . . Not a few of them, no matter what the circumstances refuse to be on duty more than a few hours of the time, and they designate their duties, when their hours shall be and if the case requires much attention that there shall be two nurses on the job. Another nasty trick that some of the so-called 'best' trained nurses are employing is to refuse everything but the easy cases and worse still to refuse even those unless in the hospital. . . .

"Many trained nurses have lost sight entirely of the humanitarian side of their work. . . . Many trained nurses are living up to the ideals of their profession but there are so many more who are not doing so that nurses as a class should purge their ranks of those who are beginning to disgrace the nursing profession by practices that are no better than those of the worst trades unions."

All of which and more, magazines, physicians and economists almost without end, might be quoted to prove that the nursing problem has become increasingly an example of the frequent paradox that where illness is concerned "the cure is worse than the disease." The medical pro-

fession views with positive unbelief this Frankenstein of its own manufacture.

Autocracy of the sick room has become vested in the despotic realm of the nurse who has become a positive czar and who is as luxurious an expense as any Romanoff ever dared to be. Sick-ness is an expense that no family budget can afford to carry under the best of circumstances but under the present conditions insisted upon by a trained nurse before she will accept a case, the employment of such assistance in illness becomes enough to actually bankrupt a family.

The registered nurse situation today illustrates perfectly the process of refusing to render service in accordance with hire received. The shift system now being forced upon the public makes the patient of less importance than the number of hours a day that a nurse stays in the patient's room. If the patient is dying of typhoid for example a nurse puts in no more time than if the case is a neurasthenic and vice versa. Nurses are demanding the same hire and the same consideration out on a case where the actual nursing duties—many of these not at all menial—require only from one to two hours per day. Take for example a case of some degenerative disease where the patient's cumulative chronic condition demands the presence of a trained caretaker, even though the duties are simple; what the present movement tends to insure would be that such a patient should have a shift of three nurses per day each at the rate of fifty dollars a week and board. This is a case of *reductio ad absurdum* of liberality in the care of the sick. Any doctor who put in a fee of \$150 per week and board for the care of such a case would be accounted a brigand. Yet this discounting of wisdom, skill and directive science upon the part of the physician is made a weapon of argument by the already over-trained and over authoritative nurse in her fight for the greatest pay and the least service. The ranks of the nursing profession have held and do hold thousands and thousands of heroic and unselfish women, who undoubtedly have been at the mercy of overbearing patients but the present crusade is basically wrong.

The topic should come up for discussion at every gathering of medical men until some inspired man or society hits upon an idea that will clear up current impracticable conditions.

## A NEW CENTRAL PSYCHIATRIC ASSOCIATION

During the meeting of the American Psychiatric Association this year in Cincinnati there was formed the Central Psychiatric Hospital Association, which is composed of private sanitariums for the care and treatment of nervous and mental diseases. The organization was the culmination of several years' thought and a feeling that the necessity existed for such an association. At Minneapolis in October permanent officers were elected as follows:

President, Dr. Thomas Ratliff, Cincinnati, Ohio.

Vice President, Dr. Russell Doolittle, Des Moines, Iowa.

Secretary-Treasurer, Dr. D. A. Johnston, Cincinnati, Ohio.

Councillors, Dr. Frank Norbury, Jacksonville, Ill.; Dr. Karl Menninger, Topeka, Kans.

The purposes of this Association are to foster co-operation among private hospitals for nervous and mental diseases for their mutual benefit and to promote and maintain higher standards, increase efficiency of organization and the advancement of scientific care and treatment for those in their care.

A committee on standards is meeting with the council in Chicago, December 14, 1927, to formulate standards for hospitals of this type.

## THE GENERAL PRACTITIONER

"Ye are the salt of the earth, but if the salt have lost his savour, wherewith shall it be salted?"

It is reported that recently a Dean in one of the largest and best medical schools in America told a class, just beginning the study of medicine, that his school did not propose to train a man to become a general practitioner. That Dean without doubt knows much more about modern medical education than most of us, but if he really meant that there is no longer a need for the general practitioner he is altogether wrong. The family doctor has been the backbone of our profession and we refuse to believe that he has been but a stage in an evolutionary process.

Every community needs him. They can't get along without him—and if the day should come

when he disappears the world will be a poorer and dingier place to live. The salt will indeed have lost its savour. It is a real pleasure to see some of the brightest, most capable and best equipped of the young doctors going into general practice. May the tribe increase.

BATTLE MALONE, M. D.

J. T. S. M. A.

## HAVE YOU SUBSCRIBED FOR THE HISTORY OF MEDICAL PRACTICE IN ILLINOIS?

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## Correspondence

RATHER HUMILIATING THAT SO  
LITTLE INTEREST IS MANIFESTED  
BY DOCTORS IN THE HISTORY OF  
THEIR OWN PROFESSION

Clinton, Iowa, October 16, 1927.

Dear Doctor Whalen: I am sending a sub-  
scription for the Medical History of Illinois and  
will send check in payment of bill.

Some years ago we began this work in Iowa  
and in a more serious way two or three years ago,  
as a limited edition of 250 copies. We were  
interested later in the undertaking of the Illi-  
nois, and still later of other state societies,  
Michigan and perhaps Wisconsin.

It is rather humiliating that there should be  
so little interest on the part of doctors in the  
history of their own profession. I note in our  
State Historical Society publications that every  
interest has been represented except the medical  
profession, and yet doctors contributed much  
outside their profession to the early development  
of their respective communities.

Our earliest records only go back to about  
1820 and then to army surgeons. We have found  
that Dr. Edmond Andreas located in Dubuque in  
1833 as the first man of note to come to Iowa  
with the definite purpose of practicing medicine.  
It appears that there was a flow of settlers west,  
into Illinois and on into Iowa, the difference  
being only in the date of settlement, not of hard-  
ship nor before 1870 experiences. We have ar-  
ranged our work as the first 50 years of practice  
of medicine in Iowa.

D. S. FAIRCHILD, M. D.,

Editor Journal of the Iowa State Medical So-  
ciety.

## THE POWER OF ROUTINE

A physician in town specializes in spinal cases. To  
save time he has his nurses strip everyone to the waist  
before he sees them.

A young woman insisted upon seeing the doctor, so  
the nurse told her that she would have to prepare for  
the consultation. When her turn came, the doctor faced  
a frightened young woman undraped to the hips.

"Well what's your complaint?" he asked.

"I'm afraid, doctor, that it's a mistake on your  
nurse's part," she panted. "I merely came to see if you  
would renew your subscription to the *New Yorker*."



## MALIGNANCY OF THE LARYNX AND ESOPHAGUS TREATED BY RADIUM EMANATION

Frank Richard Herriman, in *Laryngoscope*, September, 1927, says:

When radium was first applied to malignancy of the larynx and esophagus, the methods were so crude and the results in practically all cases so unsatisfactory, that it was very soon abandoned. Malignant lesions in these structures are so inaccessible and the tissues of which they are composed so quickly rendered radiosensitive that radium has now few advocates as a treatment for disease there located. In the author's clinic the use of radium had been discontinued for several years when he revived the therapy, using a new technique however—the implantation of radium emanation in screened "seeds," directly into the affected tissues.

For laryngeal growths the technique consisted in exposure of the malignant area by direct laryngoscopy or the suspension method—the latter being preferable. For growths situated in the esophagus, a standard esophagoscope was brought into service. When adequate exposure had been obtained, the dimensions of the growth were carefully estimated, and the entire area of malignancy implanted at regularly spaced intervals with the removable platinum radon seeds designed by Joseph Muir of New York. The employment of suspension laryngoscopy makes the placing of radium in the larynx a comparatively simple matter, and with the esophagoscope and the aid of the fluoroscopic screen, it can be put in the esophagus with equal facility. The opponents of radium in the treatment of such malignancies have continued to cite the severe reactions and distressing sequelae which follow the use of the crude applicators first employed for work in these peculiarly sensitive structures. When the implantation technique was first instituted in the larynx bare tubes were employed, and the necrosis produced by these unscreened containers caused sloughing of the irradiated tissues, and frequently grave injury to the adjacent healthy cartilage. In the esophagus the caustic rays were even more dangerous, for sloughing meant lung perforation with almost certainly fatal results.

The design of the seeds used by the author obviated practically all the difficulties encountered under the old methods. Implantation is by far the most accurate way of assuring even and adequate radiation throughout the neoplasm, and as soon as it became possible to implant a screened container, doing away with all danger of necrosis, the radioactive centers could be so placed that every section of the growth would be reached by the therapeutic rays, while all caustic action was eliminated. One of the most important features of these seeds is that they are removable, as this does away with the difficulties involved in permitting foreign bodies to remain in the tissues of the upper alimentary canal.

Details of eight cases selected from a larger series are given. All the patients were "hopeless" so far as surgery was concerned, at the time the implantations were undertaken. When this report was made at the

New York Academy of Medicine, December 22, 1926, the patients were all alive, although the period which had elapsed since the treatment was begun was insufficient to permit the drawing of any conclusions as to permanent relief which could be afforded.

The author feels that even if no more than temporary palliation has been secured, this, in itself, is well worth the effort required to apply the treatment, inasmuch as every patient had been doomed to die within a few weeks, when they first came under his care. Most of them had been able to return to their regular occupations, and even those who were still obliged to wear tracheotomy tubes were comfortable and pursuing their ordinary mode of life.

### THE THIRD DEGREE

Joseph S. King politely handed his card to an inquiring reporter. The card read as follows: "Joseph S. King, B.T.H.M.B.S.D.C." When asked what all of the titles were, King proudly exclaimed: "Baptist, Truth, Heaven, Master of Biblical Science—and Doctor of Chiropractic!"

It is only a short step, now, until the burglar on the witness stand hands the prosecuting attorney his card—"A. Yegg, B.S.C.S.S.M.Y.M.O.Y.L.," which we will readily understand, means, "Boozer, Safe Cracker, Second Story Man; Your Money or Your Life."

And the gasoline station man who fills the flivver tank with gas may hand out cards bearing this: "Ime Knott Rockefeller, I.C.F.T.B.P.I.E.," and knowing his little habits, we will realize that he is merely explaining "I Collect for Ten, But Put in Eight!"

R. & C.

### COOPERATING WITH THE DOCTOR

"Doctor," said his society patient, "I am short of money, but perhaps we can compromise on your bill."

"Compromise?"

"Yes; I'll settle for your prescriptions and return your visits."

### NO WONDER!

A Philadelphian committed suicide and left the following note:

"I married a widow with a grown daughter. My father fell in love with my stepdaughter and married her—thus becoming my son-in-law—and my stepdaughter became my mother, because she was my father's wife.

"My wife gave birth to a son, who was, of course, my father's brother-in-law and my uncle, for he was the brother of my step-mother.

"My father's wife became the mother of a son. He was, of course, my brother—and also my grandchild for he was the son of my daughter.

"Accordingly, my wife was my grandmother because she was my mother's mother. I was my wife's husband and grandchild at the same time—and as the husband of a person's grandmother is his grandfather, I AM MY OWN GRANDFATHER!"—*Med. Insurance*.

## Original Articles

### RELATION OF MEDICAL SCHOOLS TO PROFESSION\*

IRVING S. CUTTER, M. D.

Dean, Northwestern University Medical School

CHICAGO

Inasmuch as the medical profession, as represented in its present personnel, is the product of some type of medical education, some legally constituted school for the training of physicians, it follows as a natural corollary that the profession is now and always will remain vitally concerned with medical education. The history of the comparatively recent development of medical education is easily traced showing the marked interest of the profession at the genesis of the reform movement.

In May, 1867, at a convention of delegates of medical schools of the country held in Cincinnati, resolutions were passed recommending changes in the course of study, including a four-year curriculum in place of three.<sup>1</sup> Nothing came of the Cincinnati Convention. Ten years later (1877) at a meeting of the American Medical Association in Chicago, representatives from thirty-one medical colleges of the country formed the Association of American Medical Colleges and adopted a constitution, by-laws and articles of confederation. The articles prescribed that at the beginning of the session of 1879-80 there should be required two sessions—three recommended—of not less than twenty weeks. At its meeting in 1880 the Association of American Medical Colleges increased the requirement to three courses and agreed upon preliminary examinations as a condition to admission on and after the session of 1882-83. This move for a preliminary standard and increased instruction failed because the college faculties refused to carry out the recommendations of the delegated body and in 1881 the association of American Medical Colleges was dissolved.

Practically concurrent with the action of the delegates from the medical colleges (1880), the Illinois Board of Health adopted a schedule of requirements effective with the session 1882-83, thus enforcing, at least in Illinois, what the delegates from the colleges had repeatedly acknowl-

edged to be a necessity.<sup>1</sup> The Illinois Board of Health constituted the only legal or moral force in the United States working toward the elevation of the medical standards between 1881 and 1892. The power behind this Board was Dr. John H. Rauch, its secretary. In 1892 a change of administration in Illinois brought with it a sweeping change in the personnel of the Board and the powerful influences of the Illinois Board of Health was lost.<sup>2</sup> Dr. W. W. Keen characterized the Illinois Board of Health as "A body which has done more for medical education than any other in this country."<sup>3</sup> In 1890 the Association of American Medical Colleges was re-organized and in 1894 a program of publicity was inaugurated by the American Medical Association. This was followed by the formation in 1904 of the Council on Medical Education and in 1910 by the epoch-making Flexner report.<sup>4</sup> This latter report is without question the most powerful document bearing upon medical education in America. Its publication came at an opportune time when medical educators and colleges and universities had been aroused to the existence of deplorable conditions in medical colleges by the Council of the American Medical Association, and after the Association of American Medical Colleges had been stirred to a point where they were willing to do things, although frequently powerless because their faculties repudiated the actions of their delegates. Consistent and constructive progress dates from the publication of the Flexner report.

The graduates of the past twenty years or so constitute the product of a changing educational viewpoint. Perhaps the stabilizing mean has been reached, perhaps not—nevertheless it cannot be disputed that the general level of preparation for medical training has been raised and even the actual training in medicine has been improved. This is the concern of all of us; as to the ranks of medicine there are constantly being added several thousand new graduates yearly. This means that in the course of a dozen years the personnel of the profession as a whole is subject to radical alteration. We must recognize therefore that the ideals, the ethics and the actual

1. Seventh Annual Report, Illinois Board of Health, Springfield, 1891.

2. Bureau of Education, Bulletin No. 31, 1925.

3. Harvard Alumni Association, 1894.

4. Medical Education in the United States and Canada, New York, 1910.

\*Read before the Chicago Medical Society, Nov. 30, 1927.

1. Only two or three schools at that time required three years.



practice of medicine are subject to wide and sweeping change each twelve to fifteen years—not at one given moment but by the increasing ratio of recent graduates with newborn ideas. We are willing to admit that the graduates of each succeeding year *should* be better trained than those preceding them, but it must be our concern that technical training alone shall not be substituted for the ideals, the altruism, the art of medicine.

The standards of the profession quickly reflect the standards of medical education—moral as well as intellectual—and unless the schools recognize the larger duty of training only men and women who are capable of sustaining the honor and integrity of the profession; of carrying forward the banner of service to humanity, the profession—as such—will be bound to suffer. A business-like management of one's practice, of one's personal affairs, business methods applied to all phases of medicine, need not in the least kill one's sense of duty to his fellow-man or his responsibility for their well-being. Medicine is not a trade and should it ever become such, its professional character, its service character and its appeal to society will be utterly lost. One responsibility then we lay upon the schools, namely, that medicine shall still be taught as a profession of ideals, by men of character and of sympathy, not however, with the lax business teaching of the profession of a generation or two ago.

One may wonder if the time has not arrived when the profession as a whole can make a real contribution to medical education by their cooperation and counsel. Thought in medical education is not crystalline; on the contrary it is remarkably pliable and easily moulded. Experiment in medical education is encouraged and of all interested in the future of medicine the present members of the profession have the most intimate knowledge of its needs. They know wherein their training was weak—where it required strengthening, and wherein it may have been superfluous. The type of training furnished by the schools should be that which will increase the power of the profession to prevent and control disease and to restore to health the greatest possible number. The schools are trying to do this, but they need and require from the profession a type of unselfish cooperation that will make for the good of the

whole. No school, regardless of the size of its endowment, can ever be built around one or two or three outstanding figures as was possible a generation ago. Schools today, realizing their enormous responsibility for the future of the profession, must guarantee the fundamental character of their graduates, their honesty, ideals and altruism, men scientifically and morally sound and with almost as much knowledge of the art as of the science of medicine.

The needs of the profession—the types of graduates desired, the emphasis on this or that in the medical curriculum—can be ascertained by the schools only through the closest possible contact with the profession. It is presumed that this contact is made through the Council on Medical Education and Hospitals of the American Medical Association, and yet it is hardly reasonable to expect that a single agency, the Council, can maintain an intimate contact with the profession as a whole. It would seem reasonable to expect that the schools themselves should create and maintain a fairly close contact with the profession in states in which their graduates normally locate. Only one state society of recent years, namely, Louisiana, has made any attempt to advise with medical schools looking toward a better professional output.

There is the greatest sympathy on the part of those immediately concerned with medical education in the experiment now undergoing trial in several American and a few English medical schools, namely, the development of whole time teaching. It is to be expected that the profession will watch the experiment with great interest—some with full approbation, some with certain reservations, and still others with distinct disapproval. The whole time plan, in part at least, has been in existence for a decade or more and while conclusions cannot be drawn, yet certain observations appear warranted.

It would seem axiomatic that a teacher can instruct only in that which he knows. A teacher of fairly narrow vision will rarely be able to stimulate creative thought and, in the practice of medicine or surgery, it is untenable to hold that the true teacher is only he whose practice is limited to his research laboratories and the comparatively few beds allotted him in a university hospital. The widest experience with sick people is narrow enough without the instructor being com-

pelled to take the figurative vows of renunciation of practice. There will no doubt be found some few individuals who shrink from public contacts and these naturally will be willing, even anxious, to become whole time or cloistered teachers of medicine, but what stimulus will come from their teaching remains to be seen. One wonders what would have been the effect upon the teaching careers of such men as Fenger, Murphy, Billings, Senn, Abt, DeLee and many others, had they yielded, during their constructive periods, to the lure of the medical cloister. And what would have been the effect upon their students and hence upon the profession of medicine. Theodore C. Janeway, in discussing "Outsidé Professional Engagements by Members of Professional Faculties,"<sup>1</sup> points out that great clinical teachers must perforce be clinical masters with antecedent long and painstaking clinical training and that "only constant application of their knowledge can keep them such." He says, "All such plans, therefore, seek to attain the positive aim of securing university teachers and investigators through the negative method of limiting the opportunity of the professor to become a widely known master of his subject. Is this wise? Clearly not, if the result is to be that the clinical teachers of the future shall be but mediocre physicians and surgeons. The professors of medicine and surgery are not set to make physiologists or pathologists of their students. Science they must teach, the methods of exact science they must use, but it must all be applied to the solution of the endlessly varying riddles presented by the individual patient. They must fire their students with an enthusiasm for the grinding work necessary to become proficient in practical medicine, which today includes the utilization of laboratory methods on an evergrowing scale. They must maintain the respect of their staffs for their acumen and practical skill. Therefore, the professor of medicine or of surgery is truest to university type who is most completely the master of the practical aspects of his profession thus viewed. What policy of restriction can accomplish this?"

For the part time teacher one cannot but hold a strong brief. His outside contacts with the actual practice of medicine help to keep his feet on the ground and he treads a safe pathway. His

teaching will reflect both his research spirit and the lessons of practice. He will prove a stimulus to his students, his colleagues and to the profession at large—each phase of his duality aiding the other; his patients will benefit by his research and his research in turn will be more wisely directed. Hundreds of the great masters of medicine have by choice constituted themselves part time teachers—John Hunter was a part time teacher as was Edward Jenner, Cruikshank, Fordyce, Saunders, Boerhaave, Van Swieten, Haller, Cullen, Syme, Percival Pott and Osler, and the list might be extended indefinitely. These men taught not only from experiment or as Harvey put it "from the fabric of nature," but from the fullness of a wide, varied and general clinical contact. Compensation really doesn't enter into the question. The part time teacher is frequently a representative of that growing class who feel the urge of teaching and research and he is willing to forego the added income that teaching time used in practice might insure. Fortunately for American medicine this group is yearly increasing and upon their productivity depends the position of America in medicine.

The pages of the history of medicine fairly shine with the names of great teachers who at the same time were great physicians. In addition to those just mentioned, one may call to mind such names as Daniel Drake, James Jackson, Nathan Smith, Valentine Mott, William Pepper, Samuel D. Gross, Reuben Mussey, Nathan Smith Davis, S. Weir Mitchell, and hundreds of others and one may wonder what would have been the effect upon the careers of these men, had each and all filled whole time positions—and then one may wonder what would have been the effect upon American medicine.

Teaching is a great developing factor in the lives of many physicians. We recall our undergraduate days in the medical school and the two or three real teachers whose messages still live and whose words and example have become guides for our daily tasks. If we have assumed the mantle of the pedagogue, we have received even a greater blessing. The clinic and the laboratory, peopled with eager minds of real thinking power, shame ignorance into oblivion. To give members of the profession real teaching opportunities is one of the privileges of schools of medicine, and to aid in this development, is a duty. Not all can or

1. Educational Review, March, 1918; a paper read at the 1918 meeting of the Association of American Universities.



will become teachers, but teachers are needed—real teachers—as never before and widening the scope of the teaching activities of the schools will find ready response on the part of alert members of the profession. Teaching opportunities exist in a far larger number than is evident at first thought. The introduction of the clinical clerk system with its wider spread into non-controlled hospitals will of its own force seek and find teachers in places hitherto wholly overlooked. The profession generally neglects a most important teaching duty, namely, the teaching of internes. Hospitals require internes and often wonder why more applications are not received from prospective graduates. The reason is clear: the hospital offers no teaching. The interne period both to the school and to the graduate is the test of the medical curriculum. In that period the interne learns to apply his knowledge because he is taught to do so and not by blunderingly or brazenly or foolishly doing things for the first time on his own responsibility. If mere experience is desired he might better be in some rural community where physicians are badly needed. He must learn by doing—but “doing” under instruction. For years I have heard graduates characterize hospitals as good or bad based upon the teaching willingness, even eagerness, of the staff.

The medical schools of the University of Wisconsin and California are experimenting with a modified preceptor system—sending senior students to practicing physicians located throughout the state for a period of one month. Northwestern is now trying a form of preceptorship and several schools have for the past few years invited general practicing physicians to lecture to the senior class on the “how” of practice. These experiments will call for a more intimate relationship with the profession and if generally accepted will form a most desirable contact from which much good is bound to come.

Illinois has four Class A medical schools each trying to give adequate training in medicine and succeeding unusually well. Each differs from the other in some few particulars. There is, however, a common aim and most of the methods employed are similar. The State of Illinois and the City of Chicago may well be proud of these schools; each anxious to improve—to do the job better; each, however, with a definite need of contacts with the

general profession of medicine as a guide to the better training of its product.

There is no warrant for the assumption that there is a fixed and determined best plan for conducting medical education. On the contrary, the stereotyped character of the curriculum has been almost wholly lost in schools with thinking faculties. It is perfectly sound to expect that School A can train its men better under a given plan which differs markedly from an equally successful plan adopted by School B; the product of each system, considering the quality of the raw material, measuring about the same. Every medical faculty then should study its problem of medical education, keeping constantly in mind the basic factors of personnel of faculty, personnel and preparation of students, adequacy of laboratories, types of hospitals under control and in affiliation, and *most important of all* the profession of which the students must form an integral part. It would seem that in Chicago the general plan of education conducted by the four Class A medical schools could and should differ widely but the whole should present a strong challenge to leadership in medical thought, education and research, and in all this the profession can speed the day.

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### THE RELATION OF THE MEDICAL SCHOOL TO THE COMMUNITY\*

FRANKLIN C. McLEAN, M. D.

CHICAGO

Within the past few decades the American medical school has almost completely altered its character. From being an independent, self-sustaining, and in some cases profit-making institution, it has rapidly evolved into the most elaborate and most expensive type of educational institution that any community has ever been called upon to support. Support from various sources, from the state, from individuals, and from the large foundations has been poured into our medical schools, now generally conducted under university auspices, at an astonishing rate, and is still continuing to be made available at an accelerated pace.

In asking for and accepting such support from society at large the medical school accepts certain responsibilities toward the community which were perhaps not implied in the type of medical edu-

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\*Read before the Chicago Medical Society, November 30, 1927.

cation which previously obtained. Medical education can no longer be considered a private matter, but is one in which the public has a large interest. The narrow view of a medical school as a training school for doctors, having no further interest or responsibility to the community, is already passing into oblivion, and our university medical schools, at least, are assuming much broader functions.

Perhaps the most widespread and important sign of this extension of its functions is the assumption by the medical school of the duty of the extension of knowledge concerning disease. The medical school is no longer a mere assemblage of class rooms, where information concerning medicine in its current state is dispensed to listening students. It has laboratories, libraries, hospitals and clinics, and the task of advancing knowledge by research has been consciously and definitely assumed. Whether or not this function is for the moment being over-emphasized is of little importance. The important fact is that society must look to its medical schools for the solution of the problems of disease, and that the medical schools of America have at last realized their obligation in this respect. Overemphasis, if there be any, can and will be corrected, but there can be nothing more deplorable from the viewpoint of the welfare of the public than medical education without medical research. While America still should, and does make use of discoveries made abroad, for medicine is truly international in character, we are now contributing at least our share to the world's knowledge concerning the causes, prevention, alleviation and cure of disease.

There is also a still young but rapidly growing conception of the obligation of the medical school in matters of public health. It is probably too early to say that public health has actually found itself in our medical schools, but the feeling of responsibility is expressing itself in various ways; in the organization of public health courses for medical students, in the organization of courses, and sometimes separate schools for the training of public health officers, in research in preventive medicine, in cooperation with city and state authorities in the administration of public health measures, in devising methods for popular education in public health matters, and in a general way in inculcating in the medical students a sense of responsibility in all matters concerning the

public health. Much remains to be done, but in general it may be said that the medical schools themselves are proceeding in a direction which is definitely in the interest of the public.

Upon the medical schools, which constitute the sole portal of entry into the practice of medicine, also devolves the important function of selecting the most promising candidates for the study of medicine, and of moulding them into the practitioners of the future. Here there is a great moral responsibility toward the public, for the fitness of a candidate for the practice of medicine cannot be determined solely upon the basis of his intellectual and technical equipment. It is true that our states retain the right of final judgment upon candidates for licensure, but whereas the state authorities have but brief contact with these candidates our medical schools have prolonged and daily opportunity of judging them. As a result it is the medical school which in fact does determine the character of the material entering upon the study of medicine, and finally emerging into its practice. Too much attention cannot be paid to this function of the medical school, if the medical profession is to retain and improve its position of leadership in the community.

But the greatest of the responsibilities of the medical school to the community, that of the quality of medical education itself, I have left to the last, for the reason that this question, although apparently simple, has been clouded by issues which may or may not be relevant. That all is not well with American medical education seems to be a widely accepted view, in spite of the rapid improvements in its physical facilities. In fact, it is even suggested that some of the ills of today are the results of the rapid changes which are taking place, and there are many who feel that the emphasis in the present movement is being put in the wrong place. There are constantly recurring signs of a wide-spread opinion that medical education is becoming too scientific, too refined, and too expensive, that it encourages too much specialization, and that certain districts, especially rural districts, are suffering from a change in medical education which leads the newly graduated physician to locate in the city rather than in the country.

As a result of this feeling we not infrequently hear the suggestion seriously made that another type of medical education, less expensive in time



and in money, less exacting in its scientific and educational requirements, and more practical in its nature, should be encouraged, with the object of producing another type of physician, of which a large percentage might be expected to become the general practitioners in the rural communities.

In this suggestion there is the direct implication that the medical school is failing in its primary and most important duty—that of producing physicians to serve the community. The physicians are being produced, more highly trained than ever before, but if this very fact of their thorough training is resulting in a lack of service to the community, rather than increased and improved service, then something is obviously wrong.

This problem, although it may be relatively new to us, is not new, nor is the current discussion new. Let me quote from a distinguished German surgeon and educator, Theodore Billroth, writing in 1875, more than fifty years ago.<sup>1</sup>

"There is . . . the more or less openly discussed opinion that the study of the natural sciences (including physiology) is stressed far too much and at the expense of the student's professional medical training; that physicians do not need to be scholars, since their first business is to learn to treat the sick. In this view of the matter, the more general culture a physician gains, the more discontented will he be later in his profession, particularly in rural districts; the more it will require to content him, intellectually as well as materially; the more unhappy will he feel in his mean surroundings, among uncultivated people; the more estranged will he be from the common people who have more faith in a man of their own sort."

Billroth's answer to these arguments, and to the proposals of those who wished to found "inferior medical schools" to train the general practitioners, was vigorous and emphatic, and may be read at length in his book on "The Medical Sciences in the German Universities." Suffice it to say here that in spite of the same problem in their rural communities, the German countries, who started with scientific medical education fifty years before we did, have not yet found it necessary or desirable to lower their standards of medical education. We had a century of low standards in medical education in this country before the

present movement got under way. Are we to be made to believe that a return to these low standards is the answer to our problems? We may as well believe that a return to lower standards of living is the solution of our economic difficulties. It is inconceivable that America, at present providing unparalleled resources for improvement of medical education, will accept a return to lower standards as a way out of something which after all may be but a temporary difficulty. I say nothing about the doubt which exists in the minds of many, as to whether these "practically trained physicians" would actually migrate to the country, or as to my own belief that they would serve chiefly to retard the improvement of medical practice in the cities.

It is my firm conviction that a first obligation of the medical school to the community is to provide the best, and only the best medical education that it is capable of giving. Admitting that there is difficulty at the present time in giving the benefit of such standards of medical education to the community, or to society at large, the people of America, including those in rural districts, may be expected to demand an increasingly improved type of medical service, even though they may grasp at straws when faced with the immediate difficulty of securing any medical service at all.

I should hesitate to proceed with this discussion under the title assigned to me, were it not that we have as yet failed to disclose the fundamental weakness in the argument for the inferior medical schools. To do this it is necessary to show that the real source of the difficulty which admittedly does exist is inherent in the progress of medicine itself. It is common knowledge that the past fifty years have witnessed astounding progress in the knowledge and practice of practically all fields of medicine and surgery, so that the sum total of knowledge and technique added to medicine during this period has been greater than all the accumulations of past history. Under these circumstances it would seem wise to inquire into the question as to whether a type of medical service which was suitable to the state of medical knowledge fifty years ago is still and may be expected to remain suitable. This is particularly necessary since the argument for the inferior medical schools rests, perhaps unconsciously, on the assumption that medical practice is fixed and immutable.

Before the days of modern surgery, with its dependence upon a complicated operating-room technique; before the days of roentgenology, demanding its special apparatus, and by its refinement of diagnosis leading to operative procedures previously undreamed of; and before the days of modern medicine, with its increasing reliance upon the laboratory, it was possible for the resourceful practitioner of medicine not only to possess most of the knowledge of medicine and surgery, but also to practice medicine successfully and satisfactorily to himself and his patients in an isolated community. The proposal we are discussing discounts the present and future state of medicine, and aims to put the isolated community back into the dark ages, rather than to make modern medicine available to it.

This lack of adjustment of modern medicine to the needs of the isolated community is accompanied by another serious maladjustment to modern social conditions. The increase in the domain of knowledge of medicine, and the additions to its specialized techniques, together with changing social conditions, have led to increased specialization, regarded by many as a menace to the general practitioner, and to medical practice in general. Largely due to the extension of the field of medicine, and to specialization, the cost of adequate medical attention has risen to a point where at least a large part of the structure of the practice of medicine appears to be on an unsound economic basis. Rappleye<sup>2</sup> states that "about 80 per cent of the population . . . have difficulty in meeting the costs of hospital care and other expenses incident to serious, obscure or prolonged illness, particularly if such illness occurs in the wage earner of the family." Whether his figures are correct or not, it is a matter of common knowledge to all of us that there is a great share of the population which has no access to the best medical skill, even in cases of dire necessity, and that both the factors of distribution of physicians and of the economic situation of the individual enter into this situation.

M. L. Harris<sup>3</sup> has recently pointed out, in the columns of the *Journal*, that the practice of medicine is a monopoly, and "that this monopoly entails on the profession a definite and distinct duty which cannot be delegated, and this duty is the care of the sick and suffering." As he says, this "doesn't mean the care of some of the sick, or

even of all of the sick some of the time, but it means the care of all of the sick all of the time." Be it said to the credit of the medical profession that it has not faltered in responding to the obligation of providing free medical care for the indigent, even though in so doing it has often been exploited. In fact the precedent of providing medical care and attention free to a large proportion of the population is so firmly fixed in the minds of the public that when plans were prepared some months ago for the building of a 4,000-bed hospital on the lake front of Chicago not one cent for compensation of physicians was included in the estimated cost of running the hospital.

If a large part of the community expect and receive free medical care, and if perhaps only 20 per cent. of the entire population are capable of paying the cost of adequate medical attention, in serious or prolonged illness can the practice of medicine be said to be on a sound and permanent basis, and should the medical school expect this basis to continue and direct its efforts accordingly? Unless the solution is to be found in a return to cheaper medical education, with a possible cheaper medical practice—the medical school must be left to its duty of improving, rather than cheapening medical education, and the problem of providing medical service for the rural community, and for the great portion of the population with restricted means must be solved in some other way.

Rappleye<sup>2</sup> very conservatively states that "in the present generation of practitioners it is possible that some modification of present methods of financing medical care will be seen in certain sections of the country for some economic groups of the population and for certain types of attention and care." M. L. Harris<sup>3</sup> is more specific in his belief that the medical profession should sponsor medical institutes in every community, to include all departments of medicine, where every patient unable to pay reasonable fees to his physician could receive the best of medical services at a cost within his means. The medical school is concerned with this type of proposal, for the reason that some of our neighboring states have already assigned to their university medical schools the duty of providing adequate medical care for the people of the states, and on a basis which is within the capacity of the in-



dividual to pay. This may be taken as an indication of the answer of society to the question as to whether a low grade medical service will meet their demands.

The present situation, as it affects medicine and society, has recently been summarized by H. H. Moore<sup>4</sup> as follows:—

The superstition and ignorance of primitive times and the inaccurate methods of empiricism have given way to systematic procedure based upon science, the crude tools of mediaeval centuries have been replaced by a large number of ingenious instruments requiring a highly developed technique, and the insanitary institutions of earlier times have been superseded by costly and efficiently managed hospitals and clinics. This progress has made possible the control of many diseases hitherto responsible for a vast amount of suffering and premature death. Notwithstanding these remarkable advances, a considerable number of preventable diseases still kill little babies, cut short the lives of men in their prime, and keep millions of the nation's citizens in a state of depressed vitality, incapacitated for efficient labor and the joy of living. The failure of society efficiently to apply the knowledge in its possession regarding the cure and prevention of disease is due partially to the fact that the development of scientific materials, equipment, technique and personnel has been more rapid than the organization of personnel and agencies for the utilization of these facilities. While there are over 1,000,000 persons engaged in the field of medicine and approximately \$5,000,000,000 invested in hospitals alone, and while a high degree of organization has developed within certain unit agencies, medicine remains a fundamentally individualistic professional service. The services of general practitioners and specialists, laboratory services and various types of therapy requiring expensive equipment have not been organized into unit agencies; and little effort has been made to coordinate unit agencies into well balanced programs of preventive and curative medicine for the purpose of providing the most effective and most economical service for all the people. This lag has resulted in serious maladjustment, of which there are at least six specific manifestations.

First, there is an inadequacy of personnel and of financial support among official health agencies. Second, there is a shortage of physicians, hospitals, convalescent homes, dispensaries, dentists and nurses, and in the cities, where a more nearly adequate supply of private practitioners is to be found, they often appear to be inaccessible. Third, many people are unable to pay the present cost of scientific medical service, not so much because physicians are charging high fees (although some of them do) as because, in its present relatively unorganized condition, medical service is necessarily expensive, and because the people will not and often cannot save sufficient money to provide for the emergencies of sickness. Fourth, a large proportion of men and women are patronizing cultists or quacks because they are dissatisfied with the service

they obtain from regular practitioners. Fifth, physicians themselves are not receiving in many cases adequate income, and many practitioners are handicapped for lack of hospital facilities. Finally, there is an insufficiency of interest among private practitioners in preventive medicine.

If these conclusions, based on an exhaustive study of the situation, may be assumed to be fairly correct, what should be the position of the medical school in this difficult problem of the adaptation of the practice of a rapidly changing medicine to changing social and economic conditions? I believe that its first duty is to uphold the improved and improving standards of medical education, in the belief that in the long run such an attitude will best serve the public interest. In the second place it should take an enlightened and constructive position as to the place of modern medicine in modern society. It should study the social, as well as the professional aspects of medicine, and should resort to bold experimentation if necessary. To aid in solving these problems in the joint interest of the medical profession and of the public would seem to demand the best that we can have in our university medical schools. To mould the economic and social factors upon which medicine so largely depends into medical education and into medical thought, with a resultant effect on medical practice is a vital obligation of the medical school to the community.

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#### TEACHING CLINICS: GALL BLADDER OR UPPER ABDOMINAL CONDITIONS\*

CHARLES E. HUMISTON, M. D.

CHICAGO

I have only about ten minutes in which to present four cases.

This man has had stomach trouble for ten years. He had an appendectomy without relief. In August, 1925, he was operated on for a perforating gastric ulcer, a posterior gastro-enterostomy being done. The posterior wall of the

\*Presented before joint session of Sections on Medicine and Surgery, Illinois State Medical Society, Moline, June 1, 1927.

stomach had become adherent to the mass. The operation was followed by apparent relief.

His pain would come on two or three hours after eating and was relieved by taking food. Then it would disappear for six months, only to return.

As a school boy he had something which "doubled him up." Once or twice a year the attacks would recur and then more frequently. He had medical treatment which was useful but not final. He still had his trouble. He had some surgical treatment. His appendix was removed, thinking that would help some. It did not. He was "doubled up" by the time he left the hospital with his same old trouble.

A man going into his case just now could state that he had a perforating ulcer of the stomach, and it just gradually grew and the inflammatory adhesions increased. He fortunately escaped with his life and he is here to show you that he is still living.

Following his gastro-enterostomy he had a peptic ulcer, at least the symptoms of it in the jejunum. Probably that is what the trouble was. At any rate, under medical treatment those symptoms have subsided.

You feel perfectly well now?

The Patient: Fine.

Dr. Humiston: Eat what you please?

The Patient: Almost.

Dr. Humiston: There are certain foods that distress him some but as a general proposition he is getting along very well with his diet.

Have you gained in weight and are you working?

The Patient: Every day.

Dr. Humiston: Here is a symptomatic cure of a condition which under less favorable conditions, would have ended fatally. But his perforation was into the lesser cavity instead of into the free cavity and consequently it did not become an acute abdominal emergency.

The next case is that of a young lady seventeen years old troubled with considerable "nervousness" so that it was difficult for her to finish her grades. She was in high school but unable to complete high school. She had to give up on account of "nervousness developing." She worried about things and almost made a failure of her school work. She tried occupational work

but could not make that go very well. Her mother was a "nervous" woman. She finally developed a little abdominal discomfort but found difficulty in locating just where the trouble was.

Here is a young lady just eighteen and a few days. Until the time she was seventeen she was an example of nutrition minus. She was nervous, whatever that may mean technically. She could not keep up her work in school. Something was wrong with her which was hard to analyze.

What about your weight? Were you thin before? You are picking up now.

While mentally she was not deficient, physically she was unable to apply herself, and she fell behind.

Now she comes before us having an operation. I want to say that I think the physical findings pointed strongly to what ailed her. She has here a little box. I suppose some day it might have a handle on it and be useful as a rattle. There are thirteen gall-stones in the box and this girl only seventeen years old. They were removed and the appendix along with them, and here she is. She is feeling very well. Her nutrition is better. She is stronger. She is getting along in the world and making a go of it. At any rate, she seems perfectly well and is certainly good to look at.

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The next patient is the mother of five children. Four of them are living. She is forty-nine. She has passed the menopause. She weighs ninety-seven pounds and she is not real strong.

She has been doing housecleaning lately. She is not afraid to try to work but every time she over-exerts herself she is not well. She is what she calls very nervous. Her physical complaint seems to point in the direction of her digestive system. She says "her stomach." Now, of course, the "stomach" means any part of the abdomen to some people. Her symptoms are not very clear.

They had recourse to the X-ray. While I have not time to try to analyze all this, these are the X-rays. I can see what an X-ray man points out, but when the X-ray is given to me I am just a little bit cautious about it. Thinking you may feel the same way as I do about these, I am going to show you something. You can not take issue with me very well because I will not let you.

This point is the stomach. Of course, you see



some of the colon. But the one thing I want to point out is a pocket condition here of the duodenum and a little bit of a canteen that seems to be hanging to it with a narrow neck, as if it had gone through the neck of a bottle which is larger below. After this has all passed through, that little pocket remains.

Here is a woman who is not sure that she would be willing to submit to an operation. She feels pretty well most of the time, but she is not entirely well. Ninety-seven pounds is less than she thinks she ought to weigh. I know a number of young ladies who would like to drop down that direction but I do not know of many who would care to go much below one hundred. She is eating the best she can but does not gain.

Here is a condition just beyond the stomach, with a good big duodenum, with a pocket on the side of it, and from time to time a deep tenderness corresponding to that when the physical examination is made. And the next step is what?

One must be very careful about operating on a very nervous patient that weighs only ninety-seven pounds, has pain in the back of her neck and who possibly has lost some of her children, or one, especially when you find that the kidney is a little loose.

I have one more case where the X-ray is all there is to show today. I brought this with me. The man is middle aged and he is still living. He has had an operation.

Now, with reference to what ails him. He had digestive disturbances. He had pain in the right upper quadrant and he was a good subject for an operation of some kind. About fifteen if not twenty X-rays were taken, and you see this white place on the picture. There are eight to ten stones there. They have rubbed against each other until they are perfectly typical of stones that do that to one another when enclosed in something like a gall bladder.

Now, this man had a gall bladder history. And he has X-rays there showing that he has got the stones and that they are there in numbers. That is the right side of the individual. He had an operation on his gall bladder and it was found to be perfectly normal. There was nothing the matter with it. Then it was time to look for something else. That looking for something else had

been done before, but it had not settled the question.

The injection of opaque material through the ureteral catheters had failed to connect with this bunch of stones. But in the second chapter, the right kidney was removed. That group of encysted stones was in his right kidney, all of them piled together in a pocket in the substance of the kidney where they could not be reached by injecting the pelvis of the kidney. It looks enough like gall stones to deceive anybody. And the lesson we get from that is: Do not be too cock-sure what the X-ray man tells you. Get more history—examine again.

## FRACTURES OF HUMERUS

FREDERICK G. DYAS, M. D.

CHICAGO

The accompanying photographs illustrate the efficacy of reduction of fractures of the lower end of the humerus when put up in the position of acute flexion. In the case described the boy had a large hematoma when admitted to the hospital which precluded the use of this position at that time. He was, therefore, put up in extension in a Thomas splint in the recumbent position with an ice-bag over the hematoma. Forty-eight hours later under ether anesthesia, partial reduction was obtained in the hyperflexed position as seen in the fluoroscope. Complete reduction, however, did not take place until twenty-four hours later when the fragment dropped into position as a result of the continued hyperflexion.

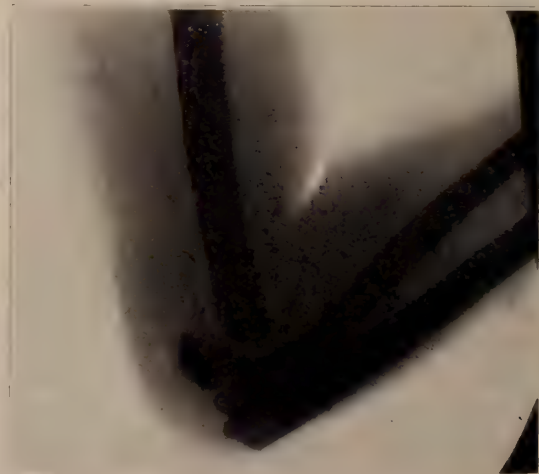


Fig. 1. Position of Acute Flexion

Complete union occurred and 100 per cent. function resulted. Passive motion and massage were begun after one week.

Fractures about the elbow joint give the best results when put up in the position of acute flexion. Great care must be exercised to observe



Fig. 2. Reduction 12 hours later

the blood supply; the radial pulse must be frequently taken as in many instances the swelling may shut off the blood supply when the forearm is put in this position. When such a condition exists it is best to put up the joint in extension and relieve the pain with an ice-bag to counteract the swelling until such a time as the position of hyperflexion may safely be assumed.

## IMMUNITIES, THEIR POSSIBILITIES\*

J. W. VAN DERSLICE, M. D.

OAK PARK, ILL.

Immunity is a relative term. The degree of resistance varies with the individual; also in the same individual from day to day. While bodily vigor may not be a guide to the degree of resistance to a given organism yet it is probable that the lowering of an individual's vigor by exposure, overwork, bad habits does to a considerable degree render the individual more susceptible to invading organisms.

Immunity is relative and its efficacy depends upon the virulence of the invading organism and

furthermore on the size of the invading army of micro-organisms.

There are the two kinds of immunity, natural and artificial. Various species show great differences in resistance to infections. Some have apparently absolute natural immunity to certain infective agents. Whether there is a true natural immunity of some human races to certain infectious diseases appears doubtful. What has appeared to have been natural immunity has been proved either to have been a lack of opportunity of infection or an artificial immunity acquired through generations of infections

However in the newborn there appears to be an immunity to certain infectious diseases. This resistance gradually disappears during the first year of life. According to Pirquet, the mother who has had measles renders her child relatively insusceptible for six to twelve months. This being true whether the child be breast or artificially fed.

A single attack of many infectious diseases renders most individuals immune for life to that specific infection. Furthermore, there is much evidence to show that such immunity raises the resistance of the individual against other infectious agents.

The ability to develop an actual immunity to certain infectious diseases has been known and practiced for so many years that it is unnecessary to speak of that phase of the subject, as all except those who will not believe are convinced of the efficacy of vaccination against smallpox.

That the use of toxin-antitoxin for the control of diphtheria will be quite as successful as is the general vaccination against smallpox there is little doubt. The period of time in which the observation of susceptible persons being given the toxin-antitoxin is now about one decade. Park reports "that while of the cases under observation some of the children are now lost sight of, yet the results are so similar in different groups that we can probably safely rely upon the moderate number of observations. It is remarkable how well the immunity persists. There has been almost no change from year to year. It appears that the vaccine has not only stimulated a production of antitoxin, but has aroused the cells to an activity which had before remained

\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Tuesday, May 31, 1927, Moline, Illinois.



dormant, so that these persons who before made no antitoxin join the larger group who normally produce it."

The knowledge that it was possible to immunize with toxin-antitoxin has been known for twenty-five years, but this knowledge could not be made use of as there was no means to identify those who required this protection.

For more than a dozen years the Schick test has been given widespread use and the results carefully tabulated. Proving of the practicability of protection against diphtheria has been done largely by Park, Zingher and Schroeder. They have done much work in the public schools and institutions of New York City.

Schick in 1913 published his monograph on a simple method by which the amount of antitoxin in the individual's blood could be definitely ascertained.

A positive reaction is recognized by a circumscribed area of redness and slight skin infiltration which measures 1 to 2 cm. in diameter. It persists from seven to twenty-one days and on fading, as a rule, there is a superficial scaling and a rather persistent brownish pigmentation. The amount of toxin injected is 1/50M. L. D. for the guinea pig in 0.1 c.c. of normal salt solution. It is necessary to give it intracutaneously so that the toxin will not be too rapidly absorbed. A slightly raised white area at the site of injection is evidence that the injection has been made intracutaneously.

It is of prime importance that the technique of the Schick reaction be carried out with the greatest accuracy.

If the toxin has been diluted and stored in a warm place it readily deteriorates. The diluted toxin should not be used under the best circumstances more than twenty-four hours after dilution. The Schick test has nothing to do with treatment nor the production of immunity; it is merely the test for susceptibility.

The immunization of those susceptible to diphtheria consists in the subcutaneous injection of a small quantity of diphtheria toxin almost completely neutralized by antitoxin in three doses given at intervals of about a week. The quantity injected each time is one c.c.

The susceptibility for diphtheria is greatest before the school age. It is probable that the newborn is given some immunity from the

mother. This, however, disappears during the early months of life and to a very large extent is negligible at six months of age. The greatest percentage of susceptibles is constantly found to be from six months to two years of age. Park recommends that the toxin-antitoxin be not given until the child is six months of age, as in giving it prior to this time the persistence of the immunity is not so great. The best time then for the use of T. A. is from nine to twelve months of age. Further, at this age the reaction to the injection is but very slight. So far as the author is aware there have never been any of the severer reactions at this period of child life.

The need for the Schick test is not great, as it is shown that seventy-five to eighty per cent. of all children of these ages are positive. This would hold especially true where the physician was caring for his own patients, as then he would have greater knowledge of any slight attack of diphtheria or exposure to the infection being overlooked.

The giving of T. A. has never become so general as the conditions seem to merit. In the city of Chicago there are approximately six hundred deaths per year. These could be practically obviated if every child were to be given T. A. between the ninth and twelfth month. The giving of the Schick test and the T. A. is now rather a simple procedure, as materials for both procedures are put out in convenient sized packages.

Expressed by comparison, how much easier and more pleasant would it be to give a healthy child three hypodermic injections than to care for a sick infected child giving the same routine. Perhaps if we were to remember when these laryngeal diphtherias are seen how the condition could have been prevented by the foresight of this form of prophylaxis it would stir our minds to a more active campaign for the prevention of this disease.

The isolation of the cause of scarlet fever gives great hope that there will be developed a successful method of attack upon this disease which will parallel the handling of diphtheria. At present the position of the author is that of watchful waiting.

On the other hand, the efficacy of typhoid vaccine is beyond question. While the period of

immunization with typhoid vaccine is quite definitely limited, yet the use of it should be encouraged where for any reason there arose a question of anticipated exposure to the infection.

There are other vaccines that are positive in their action, in their effect both upon diseases effecting mankind and the lower animals.

The advantages which accrue from the use of vaccines where their value is established cannot be estimated; however, it is well to remember that infection should be looked upon as an invading army assaulting a defending army. So far as it is possible to measure susceptibility and non-susceptibility for the general run of infection bodily vigor is probably the best guide.

As the door to further knowledge along lines of nutrition is opened more widely there undoubtedly will be added to our knowledge much that will teach how to protect and build up defense against the invasion of pathogenic bacteria.

Advance in nutritional problems lies quite as close to the prevention of morbidity as does the vaccines and serums for specific micro-organisms. This is probably very true of the milder infections and it is questionable whether specific vaccines against the milder exanthems should be encouraged.

If the ability of micro-organisms to produce disease depends upon their ability to enter the body of the host and there finding suitable nutrition and multiplying in the tissues and body fluids the protection of the individual lies in the protective quality of those body tissues and fluids.

In considering the various infectious diseases there is wide difference between the number who are exposed to the infection and those who are infected. This varies in epidemics as well as in the different diseases. The number of individuals who are susceptible to poliomyelitis or to cerebrospinal fever is relatively small, while those susceptible to measles and the common catarrhal disorders are extremely large. Here lie avenues of advance in knowledge which it may be hoped will be at least partially solved by the newer and better nutritional methods.

#### DISCUSSION

Dr. J. J. McShane, Springfield: There is one point Dr. Krafft brought out that I am very much interested in, and that is giving toxin-antitoxin to children in certain age groups. For Dr. Krafft's information—he

may know that better than I—some years ago where there were so many reactions, the toxin-antitoxin was then put up in 3 M.L.D. doses. At present the dosage has been reduced to 0.1 M.L.D. doses. For a time there were a number of severe reactions in the higher age groups which are avoided at the present time because of smaller dosage. And for the information of those present, the State Department of Public Health is distributing toxin-antitoxin through the different agencies in Chicago and throughout the State for the use of physicians, and also Schick test material to test children of certain age groups as to their immunity status.

Dr. Arlington Ailes, La Salle: I just want to say, on the use of toxin-antitoxin, that we immunized 3,000 school children in Ohio in 1924, and we immunized children from all ages, from mothers who brought their babies to the school in arms to high school girls and boys, and of that series we didn't have but two children who were more than slightly affected by the toxin-antitoxin. These two children had a reaction in the arms and were out of school two days with slight fever and considerably swollen arms. We are having some considerable reaction with the scarlet fever prophylaxis in the way of serum reactions, etc. It almost makes you slightly afraid, as a public health officer to recommend, very strongly, scarlet fever antitoxin as a prophylactic measure.

Dr. J. F. Hultgen, Chicago: What Dr. Krafft said about tissue susceptibility following toxin-antitoxin and also that of scarlet fever is very true. It is only too true. There is no question but what measles naturally does produce a sort of generalized tissue susceptibility to a great many diseases, the worst of which we find to be tuberculosis. It is this peculiar anaphylaxis which has been written about lately in the literature of the *Journal A. M. A.*, I believe.

Last fall I went into the T.-A. vaccination in my own practice. I immunized a large number of people and in two cases I got a very peculiar recurrence of urticaria which lasted about six weeks. I had some trouble explaining things to those people. There is no doubt in my mind but what there is such a thing as tissues susceptibility.

The health officers should not fail to emphasize the possibility and significance of these complications.

Dr. J. C. Krafft, Chicago: Here is the same old story: When you talk about the treatment of disease the hall is filled; but when you talk about prevention many walk out. To miss a paper of such importance as this is to miss the very thing we need. It is a subject about which the laity knows almost as much as many of us do, and a whole lot more than some of us do.

Measles, probably the most dangerous disease in childhood. 10-11,000 children die from measles every year. Why? Because it destroys all the antibodies stored up since birth, it leaves an open field for tuberculosis. The real mortality rate can be computed only after several years following an attack. I am much interested in the experiments Dr. Blatt is carrying on at the County Hospital, but so far goat serum, or any



other serum, has not given good results, except serum from convalescents.

Toxin-antitoxin has passed the experimental stage. But I do not use it in children over 10 years of age. The same precautions are necessary as are used when giving diphtheria antitoxin.

Scarlet fever serum promises much. The dosage and the method of preparation is still experimental. Immunity is transient. I have seen scarlet fever develop six weeks after the use of serum. I can record one fatality from its use.

I am a strong advocate of immunogen in pertussis. Give it in big doses, repeat every 24 hours, and use it early, and your results will be good.

If Dr. Van Derslice's paper serves the one purpose of stimulating the study of immunity, he has done well. It is the most important subject brought before this session.

Dr. Krafft: It is not the size of the dose of toxin-antitoxin. Schick gives one large dose instead of three.

The doctor from La Salle certainly has a better record with his 3,000 cases of immunization than we have.

When you give toxin-antitoxin use ether instead of iodine, the needle enters easier and there is less irritation.

## CLINICAL EXPERIENCE WITH MECKEL'S DIVERTICULUM\*

H. N. RAFFERTY, M. D.

ROBINSON, ILLINOIS

Lavata, in 1671, was probably the first to call attention to this intra-abdominal anomaly. Richa, a surgeon of Turin, in 1721, noted at necropsy the presence of the diverticulum in certain patients who had complained of colic during life. Duvignand made somewhat similar observations in 1786, while Rayer, in 1824, recognized at necropsy an inflamed and gangrenous diverticulum of the ileum, in an individual who during life had suffered from gastro-intestinal colic, and Denuce, in 1851, observed a perforation of a similar appendage produced by a cherry pit.

It remained however for Johann Friedrich Meckel, one of the greatest comparative anatomists of all times, to properly describe the diverticulum which bears his name as the omphalo-mesenteric, or vitelline duct, representing the communication between the yolk-sac and the primitive digestive tube of early fetal life.

The best discussion of the development of

Meckel's diverticulum which I have read is from Richter<sup>1</sup>, as follows:

With the closing in of the abdominal plates, the connection between the vitelline sac and the cavity of the primitive intestine becomes reduced to a tabular structure, the vitelline duct, continuous at one end with the convexity of the U-shaped primitive gut, and at the other end with the vitelline sac. The structure of the wall of the duct is, of course, identical with that of the wall of the primitive intestine. During the further evolutionary changes, the duct, in the second month, becomes reduced to a mere thread, with finally a complete solution of continuity between vitelline sac and gut. No trace of duct is present in the bowel wall of a fetus of four to six months, or in the cord by the end of the sixth month. Cell groups found in the cord at term, and believed by Ahlfeld to be vitelline remains, are considered allantoic remains by Minot. Accompanying the duct are its vessels, the arteries arising in the primitive aorta and passing along the duct to the vesicle, the veins returning to empty into the mesenteric vein. Retrogressive changes in the duct and vessels should be synchronous. The primitive gut is first an intra-abdominal organ, but traction by the vitelline duct results in a hernia of the gut into the base of the cord. This hernia begins at the end of the first month of fetal life and reaches its maximum toward the end of the second month, when, with the giving away of the duct, gradual reduction of the hernia and complete closing in of the ventral plates take place. Deviations from the normal in the evolution of the vitelline duct result in malformations that may be grouped into two quite different types: 1. That represented by congenital diverticula and their remains, such as cords, bands, etc., and, 2, that represented by congenital hernia into the cord.

This fetal remnant which we wish to discuss consists of a pouch which projects from the lower part of the ileum, having a lumen approximate to that of the latter. Its blind extremity may be free or connected to the abdominal wall or to some other portion of the intestine. It varies in length from one to eight inches, usually arises from the free border of ileum, but may be given off from its mesenteric side, and may have a mesentery of its own, although my own cases have not shown this.

In rare instances in which the diverticulum remains patulous throughout its length, it constitutes an umbilical fecal fistulae. In this connection, it is interesting to note that the first mention in the literature of the existence of patent diverticula, associated with fistulae, was not through the primary report of cases possessing demonstrable ducts leading to the intestine, but was rather incidental to the extraordinary observation of seeing living round-worms escape

\*Read before the Section on Surgery, Illinois State Medical Society, Moline, June 2, 1927.

from the open navel. Many similar cases have since been reported.

As to frequency of occurrence, Meckel's diverticulum is demonstrated in from 1 to 2 per cent. of all necropsies. Balfour reports 15 cases of Meckel's diverticulum out of 10,600 laparotomies performed at the Mayo Clinic during a period of three years, in only five of which was there any involvement of the organ in the condition making operation necessary. In 130 cases collected by Keen, 100 were in males and only 30 occurred in females. Statistics compiled by Telling show that in 13,068 necropsies, a Meckel's diverticulum was found 39 times, an incidence rate of .3 per cent.

H. L. Foss<sup>2</sup>, in his introduction to an article on "Meckel's Diverticulum and Intestinal Obstruction," says "There are surgeons of wide experience who have never seen that curious embryologic remnant above referred to. Certainly many have never had occasion to remove it, so infrequently is it present and so rarely involved in disease." And just to bear our Foss' contention, it might be mentioned that Finney, made the statement several years ago that there had not been a single instance of intestinal obstruction from Meckel's diverticulum at the Johns Hopkins Hospital over a long period of years.

Notwithstanding this experience at Johns Hopkins, reports from other large clinics and individuals of large or small experience, indicate that we may expect to find this remnant the seat of inflammation or the cause of intestinal obstruction at least once or twice in every thousand or fifteen hundred patients suffering with abdominal symptoms, and on whom we are called to operate.

As far back as 22 years ago, Porter compiled a series of cases in which a diverticulum was the cause of severe abdominal symptoms, classified as follows:—obstruction in herniae, 21; obstruction by bands, 101; volvulus, 8; intussusception, 20; diverticulitis, 17; perforation in typhoid, 5; tuberculous ulceration, 2; prolapse of bowel, 2; and pelvic tumor, 1. The advice of this keen observer, given at that time, that every Meckel's diverticulum found during the course of an operation should be removed, provided the patient's condition admits of the additional manipulation, still holds good. Its possibilities for danger should be realized by all surgeons, and

it should be constantly borne in mind as one of the possible etiologic factors in all acute abdomens, either inflammatory or mechanical in type. It is probably the most frequent congenital cause of intestinal obstruction. This may occur from the diverticulum being attached either to the umbilicus or to some other portion of the parietal peritoneum, mesentery or intestine, resulting in constriction by band, or kinking from traction.

In 1888, that pioneer on the subject of Acute Intestinal Obstruction, Reginald Fitz, in a classical paper read at Washington before the Congress of American Physicians and Surgeons, gave a critical analysis of 295 cases compiled from the literature, the most complete review of the subject up to that time. Of the 101 cases of strangulation, 21 were due to vitelline duct remains. Operation had been done in 67 per cent. of these 101 cases, with 41 deaths, a mortality of 61 per cent.

Mumford has stated that Meckel's diverticulum is responsible for 6 per cent. of all cases of intestinal obstruction, and that inflammation has been present in 13 per cent. of all reported cases.

Coley and Fortune<sup>3</sup> describe the history of a case under their own observation, and review the histories of 26 others, showing an operative mortality of 42 per cent. Wellington<sup>4</sup> compiled 326 cases which had been reported up to 1913, and found that in one-third the diverticulum was attached to the umbilicus either by an open fistula or by fibrous bands. In this series the conditions met, in the order of their frequency, were: Intestinal obstruction, intussusception, acute diverticulitis, hernial sacs opening at the umbilicus, volvulus, typhoid perforations and perforations from foreign bodies. Among the great variety of foreign bodies found in the lumen of a Meckel's diverticulum may be mentioned a Murphy button. Borden<sup>5</sup> reports a fatal case of intestinal obstruction, with gangrene of a loop of intestine, due to the fact that a Meckel's diverticulum had tied itself into a complete knot about the base of the loop, about two feet in length.

Hagler and Stewart<sup>6</sup> report a case in a man of 39, in which a fishbone had perforated a Meckel's diverticulum, resulting in the general peritonitis which caused death.

Hertzler and Gibson,<sup>7</sup> in addition to reporting a personal case of invagination of a Meckel's



diverticulum associated with intussusception, made a careful study of recorded cases, giving brief histories of 41, with the patients' ages varying from 7 months to 39 years, the average being 13 years, with 49 per cent. under 10 years of age. In 38 cases in which the sex was stated, 31 were males and 7 females. In 13 of the 41 cases, there was a history of previous attacks, a single attack being mentioned in 9, and repeated attacks in 4. Vomiting was recorded in 24 cases. Of those on whom resection was done, 13 died and 9 recovered, a mortality of nearly 60 per cent. Perhaps in all occlusions about the cecum the Meckel's diverticulum is implicated in 5 to 7 per cent. One of the most unusual cases of this kind was reported by Golding-Bird, a four weeks old infant presenting from the umbilicus a prolapse of reddened mucous membrane from which feces were discharged. The prolapse increasing, the child died, and autopsy confirmed the diagnosis of intussusception of the ileum, occurring through an open Meckel's diverticulum. Others have described cases in which the diverticulum was itself the subject of intussusception. Such a diverticulum may be found as one of the contents of inguinal or femoral hernia—the so-called Littre's hernia.

Harbin<sup>8</sup> has reported 13 cases of Meckel's diverticulum in a series of 2,624 abdominal operations, in which no special effort was made to search for the condition, and 7 in a series of 507 consecutive laparotomies in which routine search was made. Five of these were noted as causing symptoms among 314 patients with acute abdominal conditions, while 2 in 193 elective operations showed no evidence of having caused symptoms. The pre-operative diagnosis of diverticulitis was made but once, in this series of 13 cases, and this was sub-acute in type. The diverticula in his cases averaged about 14 to 16 inches above the ileocecal valve; 4 were given off peripherally, 9 more or less laterally. Eleven were resected and two were infolded. There were 2 deaths, a mortality of 15 per cent. The youngest patient was 3, the oldest 36, and in 7 per cent. of the cases the diverticulum seemed to be causing symptoms.

Benign or malignant growths may develop in the wall of a diverticulum. Raesfeld, Cullen, Cowardine, Rimbach, Roth, Tideman, Colmers and others have reported cystic tumors con-

nected with the remains of the vitelline duct. Symmers<sup>9</sup> has reported an instance of malignant myoma of a Meckel's diverticulum, and refers to Fried's report of a fibrosarcoma and to Kaufmann's case of spindle-cell sarcoma. Crile and Portmann<sup>10</sup> report another case of primary spindle-cell sarcoma of the diverticulum, this being the fourth authentic case in the literature up to that time, and the eighth instance of any type of malignancy of this organ to be reported.

Barron,<sup>11</sup> of Minneapolis, reports a child with a tumor-mass at the umbilicus, which microscopical study showed to be analogous to the mucosa of the intestine, and which he inferred to be an outgrowth of the remnant of the vitelline duct. Cullen<sup>12</sup> quotes a large series of umbilical polypoid outgrowths of this nature, from the current literature. Hektoen<sup>13</sup> has proposed the name of "Polypoid Vitelline-Duct Remains" for these growths, which have been variously designated as adenomata, by Kuestner;<sup>14</sup> enteratomata, by Kolaczek;<sup>15</sup> adenoid diverticular tumors, by Lannelongue and Fremont;<sup>16</sup> and warty or nipple-like tumors, by Holmes.<sup>17</sup>

During 1924 and '25 there were two articles in the French literature in which several cases of intestinal hemorrhage in infants and young children from ulceration of the mucosa of Meckel's diverticula were reported. Just a little later, at the 1926 meeting of the A. M. A., this question was discussed rather freely, five cases not previously in the literature being cited. Intestinal hemorrhage as a symptom of this condition was entirely new to me at that time, as I had not previously seen any mention of it, and in my five cases, demonstrated at operation, three being in children, hemorrhage had not been a symptom.

Abt and Strauss,<sup>18</sup> in reporting three such cases, review the fact that intestinal strangulation, cystic tumor due to obliteration of the duct at both ends, concretions, stenosis of the ileum by traction of the diverticulum, invagination of the duct into the parent-bowel, hemorrhage and volvulus of the ileum or the duct itself, are among the complications which may present themselves.

Later papers by Griffith,<sup>19</sup> Stulz and Woringer,<sup>20</sup> Jackson, Callene, Meyer,<sup>21</sup> Schaetz<sup>22</sup> and others have served to stimulate interest in this question of hemorrhage from a Meckel's diverticulum, chiefly from the etiologic and diagnos-

tic standpoints. In attempting to satisfy his curiosity as to the why of this hemorrhage, Schaetz<sup>23</sup> demonstrated gastric epithelium at the tip of five out of thirty diverticula which were studied both as to pathology and histology. This finding brings back to our mind the fact that Denuice, in 1908, and others since that time, have demonstrated small patches of pancreatic tissue growing from the tip of Meckel's diverticula. Schaetz's conclusions were that these islets of gastric cells may be the site of ulceration, similar to peptic ulcer, leading to hemorrhage and perforation. It is easy to see how confusing this hemorrhage might be, since in an infant our first thought when confronted with intestinal bleeding is apt to be intussusception. Ordinarily, the sharp initial pain of a colicky nature, with vomiting, shock and pallor, and the presence of a sausage-shaped tumor, would serve to differentiate the intussusception; but nevertheless the opportunity for a mistaken diagnosis would surely be present.

The differential diagnosis between intestinal obstruction from a Meckel's diverticulum and that from other causes is usually impossible; indeed, the infrequent finding of a diverticulum is apt to make it just about the last thing thought of in weighing the diagnostic evidence. The clinical picture is not unlike that of intestinal obstruction of many other types. Two things which, if present, may be considered of special significance, however, are the presence of a mass at, or near, the umbilicus, and the history of a fecal fistula from this region.

Again, in acute diverticulitis, the symptom-complex is apt to be indistinguishable from that of acute appendicitis. In our own case, the point which might have attracted our diagnostic attention, but in reality did not, was the location of the tender mass somewhat nearer the umbilicus than is the usual appendiceal abscess.

Gabele<sup>24</sup> collected four cases of simultaneous acute diverticulitis and acute appendicitis, while Pearce<sup>25</sup> has added the report of a case of acute appendicitis with acute perforation of a diverticulum.

After having gone thus far in our study of this very interesting subject, it is obvious that the various pathological conditions associated with Meckel's diverticulum, such as inflammation, ulceration, perforation, intussusception,

volvulus incarceration, and the presence of foreign-bodies and neoplasms, are of considerable importance to the clinician. Usually they are not recognized except at operation or autopsy. Therefore the primary lesson to be derived from this study is that in the presence of any obscure abdominal condition, such as one simulating an atypical appendicitis, or in cases of intestinal obstruction, one should bear in mind the possibility that a Meckel's diverticulum may be involved.

When during such an operation it is found that symptoms referable to the lower right quadrant have not been due to any pathology in the appendix or cecum, then the standard technic should involve inspection of the terminal three feet of the ileum for a pathologic Meckel's diverticulum.

I have seen five instances of Meckel's diverticulum, demonstrated at operation, two in adults and three in children. Four of them were the cause of the pathology for which the abdomen had to be opened, while the fifth was entirely innocent as to the emergency. Two of these occurred in the period between 1900 and 1916, while in the ten year period from 1916 to 1926, with accurate records of 474 consecutive laparotomies at the Robinson Hospital, we have had one case of intestinal obstruction due to this cause, one case of acute diverticulitis, with perforation, and one in which a diverticulum was found during an operation for acute appendicitis, in which it was not at all concerned in the pathology.

#### CASE REPORTS

No. 1. G. K., 18 years of age, was seen in April, 1902, in consultation with the late Dr. I. L. Firebaugh. This lad had been well until five days before, when, on returning from work in the evening, he had been seized with moderate cramp-like pains in the epigastrium, with first nausea and then vomiting during the night. After his stomach was empty he had been somewhat relieved of his pain and slept during the latter part of the night. He took a cathartic the following morning, with no result during the day, and his pain became enough worse that evening to cause the family to call their physician. Valuable time was lost during the next few days in the administration of various cathartics, high and low enemata, etc., as consent to operation was not so readily gained in those days as at the present time. At the time I saw him, five days had elapsed, and his condition seemed rather hopeless. On opening the abdomen, a Meckel's diverticulum was found extending from a point on the ileum about



twenty inches above the ileo-cecal valve to the umbilicus, with a loop of ileum incarcerated in such a manner as to cause a complete obstruction, and yet not entirely occlude the circulation in the bowel wall. The diverticulum was removed, abdomen closed, and the boy died in fourteen hours. Had we been better informed at that time, I think it is barely possible his life might have been saved by an enterostomy, as he evidently died from toxemia.

No. 2. E. C., 7 years of age, was seen with Dr. J. W. Carlisle, May, 1916. Suffice it to say this boy had a recurring syndrome of partial intestinal occlusion, with the picture so uncertain that operation was not advised until after he had several attacks, consisting of pain, vomiting and visible peristalsis, with obstipation. When his abdomen was finally opened, the findings were much like those in case one, except that the diverticulum was attached to the parietal peritoneum posteriorly and to the left, producing a sub-acute recurring obstruction from incarceration of a loop of the upper ileum. The diverticulum was removed and the patient made a nice recovery.

No. 3. R. N., referred by Drs. Kirk and Henry of Oblong, Ill., was admitted to the hospital Dec. 29, 1918. This was a boy 14 years of age, practically moribund on admission. Hurried laparotomy showed a diverticulum given off only ten inches above the ileo-cecal valve, its distal end being attached to the small intestine higher up, with about 18 inches of bowel incarcerated. This was liberated, an enterostomy made, and the boy hurried back to bed, but he died in four hours, in spite of saline solution under the skin, and the other usual procedures.

No. 4. P. C., boy nine years, referred by Dr. C. O. Highsmith, West Union, Ill., was admitted to the hospital, Sept. 2, 1921, with the diagnosis of acute appendicitis, with abscess and spreading peritonitis. The history obtained from Dr. Highsmith was that there had been no previous illness of similar or any other nature. The onset of this attack was characterized by generalized abdominal pain, nausea and vomiting, and diarrhea, with as many as 10 or 12 stools in 24 hours. His temperature ranged from 101 to 102; there was rigidity of the right rectus and recurring pains which located first in the right hypochondriac and later in right iliac region. About the third day of his illness, Dr. Highsmith had first noticed a mass the size of a lemon, just below the right costal margin. This gradually increased to the size of a grapefruit and settled lower in the abdomen, being finally located on the day of his admission to the hospital in the space between McBurney's point and the median line. This mass had seemed freely movable and very tender at all times. At the time of his being taken to the operating room, his temperature was 103, pulse 136, and general condition not promising. The abdomen was opened through a right rectus incision and the mass proved to be a spherical-shaped Meckel's diverticulum, given off fourteen inches up on the ileum, acutely inflamed and perforated. Resection of the diverticulum was done, drainage inserted and the abdomen closed. The boy died in twenty hours.

No. 5. Dr. C. E. H., a practicing physician, aged 41 years, was admitted to the hospital, Sept. 29, 1920, being referred by Dr. L. B. Highsmith of Flat Rock, Ill., on the sixth day of his first attack of acute appendicitis. Operation disclosed a ruptured appendix, with a large abscess and a spreading peritonitis. The appendix being buried in the abscess wall, it was not disturbed, as is our custom. During the insertion of the tube for drainage, the terminal ileum escaped from the gauze pack and disclosed a Meckel's diverticulum, which, however, was not concerned in the pathology. The patient had a very stormy convalescence, with hiccough for 13 days, and partial wound separation requiring secondary suturing, but was discharged from the hospital after 33 days. He was advised to report at once regarding any abdominal symptoms, as he might have further trouble with the remains of his appendix. He remained well until the following January, when he developed symptoms of a renewal of his appendicitis. He was re-admitted to the hospital Jan. 16, 1921, his abdomen opened at once, the appendix removed in the usual manner, and the Meckel's diverticulum sought. This was found to be five inches in length and shaped very much like the thumb of an extremely large rubber glove. It was given off from the free border of the ileum, fourteen inches above the latter's junction with the large bowel, free at its distal end, and had no mesentery. It showed no evidence of having been inflamed, but was resected as a matter of precaution. Recovery was uneventful, and he has since remained well.

Briefly reviewing our personal experience with Meckel's diverticulum, we have encountered the interesting anomaly five times in a practice of 27 years, with an operative mortality of 60 per cent. Four of these were directly concerned in the pathology for which the abdomen was opened, while the fifth had no connection whatever with it.

Two of these were seen during the days when we were doing a rough and tumble general practice, with an occasional surgical case encountered and operated on in the patient's home. Three have been seen during the past ten years of a practice largely surgical, with the added advantages of modern hospital care.

The final lesson to be learned from this meagre experience, as I see it, is just a repetition of that to be emphasized by all abdominal emergencies: i. e., that it is not necessary to make an exact anatomical diagnosis, once it is evident we are dealing with a surgical abdomen; that recovery depends largely on recognition of this fact; that D-E-L-A-Y spells mortality.

#### DISCUSSION

Dr. Ralph B. Bettman, Chicago: I just want to add one very curious anomaly to those Dr. Rafferty has

already reported, and that is a fecal impaction in Meckel's diverticulum which I reported four or five years ago.

Dr. Rafferty, in response: I haven't anything to add. My paper was about five minutes in excess of the time allotted, and the case reports I skipped. They were rather interesting from the standpoint of delay. Three of these cases occurred in older times when it was difficult to get consent to operations in abdominal emergencies. They were all delayed like many of the cases of acute intestinal obstruction that come to us even today. There is no reason why these emergencies should not give 100 per cent. recoveries if we get at them early, as with most other abdominal emergencies.

You have practically two classes of common conditions due to Meckel's diverticulum. First, acute intestinal obstruction, and the recoveries should be 100 per cent, if you get at them early, and there is not any reason why they should not be recognized early. You have the classical symptoms of intestinal obstruction, and there is no reason for delay. The second main type of pathology due to Meckel's diverticulum is acute diverticulitis and I am convinced that that is fairly common. I have seen just the one case in 27 years, however. But it will always be confused with acute appendicitis, because the symptoms are practically the same. The only thing in the way of a differential diagnosis would be the greater mobility of the tumor mass perhaps, as in my case, and the fact that it ordinarily should be located more in the median line, than is the appendiceal abscess.

This case, No. 5, which I reported, was in one of our doctors, a man 41 years old at the time of operation. He had an appendiceal abscess in a neglected condition, as we see in many doctors and in their families, for some reason. He came in on the 6th day with acute appendicitis with abscess and spreading peritonitis. We couldn't do anything but drain him. During the removal of the gauze pack, the terminal portion of the ileum escaped into the wound and this Meckel's diverticulum was seen. It was not thought proper to remove it at this time, but he was advised to return in case he had any evidence of a return of his appendicitis. He came in four months later, his appendix was removed at this time safely, and the ileum was brought up and the diverticulum found. It was about five inches long, shaped exactly like an extremely large thumb of a rubber glove. It was resected and he made a perfect recovery and has been symptom free.

I am sure it is right to bear this in mind, but, of course, at this time we all open abdomens, looking for acute appendicitis and other conditions in the region of the cecum and we find a normal appendix and a normal-looking cecum, and it is so easy to neglect searching this terminal ileum, when many times that will explain these otherwise unexplainable cases.

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## A FOREIGN BODY IN THE PERITONEAL CAVITY\*

G. L. ARMSTRONG, M. D.

TAYLORVILLE, ILL.

This is a brief case report. Its purpose is to bring out a discussion of the features which seemed to me to justify its submission, as well as the report of what seemed to be a unique case of a foreign body in the peritoneal cavity. The outstanding points are the presence for so long a time of a foreign body in the peritoneal cavity, with little or no discomfort or symptoms. I have found nothing quite like it in a review of the literature. There are many cases of sponges, or gauze, a good many of instruments; some of other rigid objects, some of which were forced through the uterine wall, all of which caused serious symptoms, either immediately or within a few weeks or months. Other points for discussion are the neurasthenic or psychasthenic type of patient and the treatment of such a patient with such a condition.

The patient, a housewife, 53 years of age, whose general health had always been good, whom I had known for years and had treated for minor ailments, called me in August because of a mild diarrhea which cleared up in a few days. She continued to complain of many symptoms; talked mostly of her stomach—talked much and

\*Read before Section on Surgery, Illinois State Medical Society, at Moline, May 31, 1927.



listened little; a typical neurasthenic, I will say, without enumerating her array of complaints and her changes from one group to another.

Complete examination revealed but little abnormal except constipation, a mild colitis, infected tonsils with no local disturbance and which caused her no trouble or worry. Blood pressure 160-110, and a trace of albumin in the urine. She worried and talked a great deal about this and her stomach and bowels. She was especially worried about cancer of the stomach.

Roentgen ray examination of the gastrointestinal tract showed nothing except increased motility and ptosis. Incidentally the Roentgenograms showed a shadow in the lower abdomen or pelvis outside the bowel which seemed to be that of a soft rubber catheter.

The patient at this time, without knowing of this finding, complained of pain or discomfort in her right ovary, and wished she had had that region carefully "x-rayed." She said she had had some discomfort in her right ovary at times for years; that a physician making a bimanual examination years ago had felt something peculiar in the pelvis.

I then made the Roentgen ray films shown here, including a cystogram which showed the shadow to be outside the bladder. I tried to obtain in the history some clue to the presence of the catheter from her and from her husband, but without results until she was told of its presence to satisfy her curiosity about what we were searching for.

The patient then told me that a physician inserted a catheter into the uterus to produce an abortion a few days after she missed one menses, 25 years or more before. To my knowledge it had been more than 25 years since this physician left the community. This is all I could obtain in her history to account for the presence of the catheter. She stated that she went about her duties as usual, and saw nothing of the catheter again. The physician examined her and they searched her clothing, privy, etc., without finding it. She says she was not ill and had no inconvenience to speak of. The incident was forgotten and only recalled when told of the findings at this time.

She still seemed unconcerned about the presence of the catheter, but complained much of the stomach and bowels. Everything she took into her stomach caused distress and her bowels would

not move without enemata, she claimed, and she insisted upon taking them without giving the bowel a chance to act normally. She also talked of and later suggested having an operation, insisting that she had trouble with one ovary. This I advised against, as did others who had seen the films and heard the history. She talked of going to various places where I felt that it was very likely she would have her desire for an operation granted, which I explained to her husband. I advised that she go away from home, family, and advising friends, where she would receive competent advice and care, in the hope of restoring normal mental attitude.

The physician to whom she was sent agreed as to the inadvisability of operation. A surgeon saw her and the films some days later and in her presence advised the removal of the catheter. She then insisted on its removal. Her husband finally agreed to it, against my advice and that of the physician to whom I sent her. The catheter was removed without difficulty and with very little damage to the parts with which it was in contact, the fundus of the bladder and the ileum. The post operative course was uneventful and recovery good, with a degree of relief from her worries, but it took several weeks to get her out of the hospital.

Was this the catheter that was placed in her uterus and vagina more than 25 years before?

How did it obtain entrance to the peritoneal cavity, was it through the wall of the uterus or was it through a tube?

Did it cause in any event no more disturbance than related? Was it the cause of her neuroses?

In any patient with such a history and findings, was its removal imperative? Was it advisable?

In this patient, a pronounced psychasthenic, was it advisable to submit her to such an operation unless the operation be imperative? I think not. My observations of the effects of operations upon such patients has convinced me of this. The reports of many conscientious and thoughtful physicians and surgeons are likewise convincing. I think such a view much more prevalent now than ever before.

I heard an address some months ago by Hugh Cabot on the importance of careful study of personality in deciding for operation, particularly in women, which is quite apropos.

Let me quote:

Too often the resistance on the part of the physician to such a suggestion is lessened by the view that at worst a skilfully performed operation will do no harm. This is, I think, a fatal mistake. Too little have we realized that abdominal operations are not harmless amusements, and, particularly in the group of people with whom we are now concerned, may put in train forces which can, only with the greatest difficulty, be kept from leading to a life of invalidism. In these narrowly balanced, highly suggestible folk, failure of an operation to find and eradicate the cause of symptoms not only fails to benefit the patient, but makes the future treatment impressively more difficult.

It is the patient with abdominal pain which leaves lingering doubt in our mind as to the relation between an apparent lesion and the symptoms that should be most carefully scrutinized. I submit that no such patient should be advised to have an abdominal operation until after a satisfactory examination by a capable neuro-psychiatrist. The doctrine, considerably in vogue, that patients with stigmata of hysteria or a definite psychopathic personality should be operated upon first and then referred to the expert for treatment seems to me grossly unsound. It is precisely in these people that the traumatic neurosis consequent upon an ill advised operation is most common. We hear today far less of the traumatic neuroses than we did when these cases were the frequent cause of litigation, but the condition is none the less common. It is distinctly to the discredit of the profession to be charged with initiating a traumatic neurosis through the medium of an unnecessary, because unhelpful, surgical operation. Here certainly we violate the first commandment of the practice of medicine, "Thou shalt make thy patient no worse." If we are to effect striking improvement in this direction, it must come, I believe, through a closer cooperation between the internist, the surgeon and the neuro-psychiatrist.

## FRACTURES ABOUT THE ELBOW JOINT\*

PHILIP H. KREUSCHER, M. D.

CHICAGO

The elbow is the most important joint of the upper extremity. In it we deal with a complicated mechanism of both hinge and rotary action. There are in reality three distinct, though intercommunicating joints in which there is contact of humerus and ulna, humerus and radius, and ulna and radius. This combination makes an injury to this joint or a fracture near or into it all the more important. The bony landmarks most easily recognizable are the epicondyles and the olecranon of which the inner epicondyle is most easily felt. When the arm is in complete extension the epicondyles and the olecranon lie

in the same transverse line. Because of the attachment of muscles to these various points, displacement of fragments and consequent distortions of the bony anatomy occur which are not so easily corrected unless the muscle traction is relaxed. Often the release of one causes the contraction of another in such a way as to make the management of elbow fractures a real problem. A thorough knowledge of the bony anatomy and of the various muscular attachments is therefore necessary if one wishes to understand the mechanism of fractures. Without this thorough understanding of the mechanism or manner of *production* of fractures, the manner of *reduction* is difficult if not impossible.

The mechanism of the fracture depends upon the direction and type of force applied and its manner of application. Direct force applied to the tip of the elbow when the arm is completely flexed, will almost surely fracture the olecranon, while trauma applied to the posterior aspect of the joint with the arm more fully extended, may produce a Y fracture of the humerus with the olecranon body acting as a wedge. Impact against the condyles, especially the exposed inner, will cause a fracture of that condyle. Force transmitted by way of the radius or ulna will cause a break in the head or neck of the radius or a fracture of the coronoid process of the ulna. To this must be added the damaging effect of sudden muscular contractions and more especially the fractures produced by the violent torsion action of the forearm on the upper arm. To further add to our difficulty with elbow fractures, nature has placed the median nerve and brachial artery in front, and the ulnar nerve on the posterior aspect in such relationship that one or several of them may be compressed or injured very readily.

With these elementary principles before us, let us review the various types of fractures. Those of the humerus are:

1. Fractures of internal or external epicondyles.
2. Fractures of the condyles.
3. T fractures.
4. Y fractures.
5. The transverse supracondylar.
6. The diacondylar fracture.
7. Comminuted or combination fracture.
8. Epiphyseal separations.

Those involving the ulna comprise the olecranon fractures and the fractures of the coronoid process.

\*Read before the Section on Surgery, Illinois State Medical Society, Moline, June 1, 1927.



In the radius we see:

1. Fracture of neck.
2. Chipping of head (lateral).
3. Transverse fracture of head.
4. Stellate or multiple fractures of head.
5. Comminution of entire head.

The diagnosis is not difficult when one has before him the history of the production of the fracture; the early clinical picture of the deformity and distortion of bony prominences, and the skiagram.

Of these I will speak only of the x-ray picture. A skiagram improperly taken is worse than none. It is difficult to read, misleading, dangerous. Two views are always necessary; an exact lateral and a true anteroposterior. In rare cases it may be impossible to obtain one or the other unless the patient is under anesthesia. In such a case a stereo-radiogram is most valuable. Radiograms taken through a plaster cast or metal or wire splints are not acceptable. In diagnosing a fracture I have always before me a two view radiogram of a normal joint for comparison with the skiagram of the fracture.

Fractures in children are most difficult to diagnose. One has here to make a differentiation between fracture and epiphyseal separation. The skiagram is often illy defined and the degree of ossification is so variable at a given age that it is almost impossible to make a proper diagnosis. Here again it is most important to have before you both views of a child's normal elbow, at various ages and in the various stages of development.

The treatment of elbow fractures naturally divides itself into the nonoperative and the operative. The personal equation comes to the foreground. Before one can definitely decide upon the course to pursue, several factors must be taken into consideration, viz:

1. Is the fracture simple, comminuted or compound?
2. The age of the individual.
3. The patient's occupation.
4. The surgeon's ability to apply mechanical principles.
5. The operative ability of the attending surgeon.

The simple fractures offer least difficulty and can usually be managed without operation by applying common sense principles, traction and alignment. The comminuted fractures very often lead to partial or complete ankylosis, unless an open operation is done to remove or align the fragments. Remember that where there are

multiple fractures there are also numerous pieces or strips of periosteum more or less attached *along the course of which* bone develops. These exostoses and excessive callus formations lead to fixation of the joint.

The compound fracture requires surgical asepsis and drainage lest infection develop. When once these cases are infected thorough and efficient drainage must be established. The administration of a prophylactic dose of tetanus antitoxin is a very minor procedure but of utmost importance in all cases. The wiring or nailing of fragments in compound cases is poor surgery excepting as a temporary measure.

In children open operative measures are rarely indicated. In men pursuing industrial occupations where the loss of each day means the loss of dollars one will often be justified in performing an open operation for the reduction of fragments rather than make several attempts, possibly futile, in the closed method of reduction.

A surgeon who has the ability to apply mechanical principles will most often choose to reduce and hold the fracture in position by means of traction appliances, splints and plaster casts. He has a mechanical trend of mind and what is more important, the perseverance to adjust and change his splints and casts; in other words, to work with his patients until he is satisfied with the position. He has little difficulty in deciding whether an arm should be placed into a flexed or extended position; whether the hand should be supinated, pronated or held in the midway position. Such a surgeon will have his best results in applying non-operative treatment.

The use of the fluoroscope in the reduction of fractures is always indicated. I have used this as a routine procedure for the past six years. It aids in the proper approximation of fragments, avoids much delay and helps in the production of results otherwise impossible to obtain. My patients are anesthetized with gas or ether while they are on the fluoroscopic table. The ether and mask are then removed from the room and we proceed with our work. The anesthetist watches his patient by the aid of a flash light. Gas may be used very safely through the entire reduction and fixation procedure.

When repeated attempts at closed reduction have failed, we operate. Here again there are several prerequisites. A surgeon who has not had special training in bone and joint surgery must

not attempt an open operation. One who has not developed or learned to imitate an aseptic surgical technic, one who has not learned to keep his fingers and those of his assistants out of the wound, has no place in joint surgery. Every contact is a danger; sponging, ligating and suturing must be done with forceps. The operation must be done with precision and dispatch. A clean surgeon, a clean assistant, a careful nurse, constitute a triumvirate which makes for successful joint operations. When to use wire, ivory pegs, bone screws or staples must be left to the surgical judgment of the operator. He must use such appliances at his disposal as will hold the fragments in the most nearly normal position and which will make for the best possible functional result.

In order to obtain a bloodless operative field, it is my routine practice to force the venous blood from the forearm by means of a three-inch rubber bandage. A constrictor is then applied just above this bandage. This gives an operative field free from blood. The arm is well protected to avoid undue pressure on the nerves. The constrictor is removed before the wound is closed. Any bleeding points are crushed or ligated.

It is the duty of the surgeon to acquaint his patient with the severity of his case. In this age of scientific advancement when we have the x-ray and many other diagnostic and treatment methods at our disposal, the patient and often the jury expect the impossible. A general knowledge on the part of the patient as to our efforts and the exact condition of his arm, makes for better cooperation and better satisfaction with the results obtained.

The after-treatment of elbow fractures is of great importance. *Early passive* motion on the third or fourth day is followed very shortly by active and passive motion of greater range. Motion at this stage must never be carried to the extent of pain. Pain means trauma and possible misplacement of fragments. Because of the great necessity of early motion an easily removable splint or bivalved cast is used. The length of time for immobilization must depend upon the type and location of the fracture. Fixation over too long a period brings about ankylosis, while on the other hand, too early removal of fixation produces non-union. Hydrotherapy and physiotherapy, more especially diathermy, are

indicated after the tenth to the twelfth day. These measures I consider our greatest aids in the restoration of function.

There are those cases in which bad results follow our very best efforts; cases in which complications arise which from the very nature of the fracture are unavoidable. Among the most common complications are:

1. Ankylosis, partial or complete, arising from infection or excessive callus formation. This result, as bad as it may seem, is not an entirely lost cause since we have been able to make useful joints by means of the arthroplasty operation.

2. Permanent injury to the ulnar nerve can often be avoided by timely operation.

3. Injury to the musculospiral and median nerves, as well as injury to the brachial artery are often disastrous. Any nerve impingement or pressure upon the artery must be relieved at the earliest possible moment.

4. Ischemic myositis is a most unfortunate complication, unfortunate because it is so often avoidable. Volkman's original description of this lesion in 1875 attributed the contraction to tight splints or bandages. We know now that this condition arises not alone from tight bandages and pressure from casts or splints, but that it often comes from pressure of a hematoma under the muscle sheath or into the muscle itself. There are on record cases in which no splint or bandage was applied and yet pressure myositis developed. Jones in 1908 reported six cases in which no fracture had been sustained at all. We believe that nerve involvement does not enter into the formation of this contracture. Tight bandages, splints or casts must be avoided. The damage in these cases occurs in the first seventy-two hours, often in less time. A hematoma from extravasated blood in the cubital fossa or under the sheath of the muscles of the forearm, must be liberated at once if pressure symptoms are present. The tension is relieved by aspiration when the blood is not too thick. When an organized clot has formed we are justified in performing an open puncture or incision sufficiently large to permit evacuation of the clot. By relieving the pressure we maintain the integrity of the muscle fibers and the tendon sheaths, and prevent this terrific contracting deformity.

To summarize:



1. A thorough knowledge of the anatomy and mechanism of fractures is necessary if we wish to obtain good results in fractures of the elbow-joint.

2. Closed reduction and fixation of fractures should be attempted in the vast majority of cases.

3. The success of the operative management of fractures at the elbow-joint, as in all bone surgery, depends upon the positive indication for operation and the surgeon's ability to perform aseptic surgery.

4. Cooperation of the patient makes for better results.

5. The after-treatment must be the subject of as much thought and consideration as the reduction. Early active and passive motion is very essential.

6. Complications must be managed promptly and fearlessly.

30 N. Michigan Avenue.

#### GASTRIC CARCINOMA\*

BEN D. BAIRD, M.D.

GALESBURG, ILL.

It is with rather gruesome interest that we contemplate the statisticians' figures, that last year about 120,000 people in this country died of cancer, which was an increase of 20,000 over the figures for 1920. And of this number, about 30,000, or 1 in 4, died of cancer of the stomach. Whether or not we accept this statement as true, we will probably agree that the death rate from cancer is entirely too high.

The occurrence of cancer keeps pace with the increase in the span of human life (a sad commentary on advancing civilization). Better sanitation, better living conditions, and better care of babies have increased the span of human life from about 33 years in 1900, to about 55 years in 1925. They have also apparently prepared a seed bed for cancer.

One-third of all cancer occurring in the male, and one-fifth in the female, are of the stomach, and the average age is 56 years in man, and 54 years in woman. The range is from 20 to 80 years, reaching its peak about midway between these two extremities.

Etiologically, it remains as much of an enigma

today, as it was when Hippocrates excised cancer about 400 years before Christ. Although much progress has been made by investigation, we are still groping in the twilight zone of ignorance for its origin.

One theory stands out more prominently than all the others, and is quite universally accepted by clinicians, surgeons and pathologists, as having something to do with its etiology, and that is recurrent local inflammation, from irritation, as first pointed out by Broussais.

Henley recently advanced the idea of lymph stasis, being concerned in the production of cancer, and pointed out that greater lymph stasis on the gastric side of the pylorus, in comparison with that of the duodenal side of the pylorus, had to do with the greater preponderance of cancer on the gastric side.

Infection has been shown by Rosenou to have much to do with the etiology of gastric ulcer, and the tendency for carcinoma to engraft itself on an ulcer base, in the stomach, is quite well agreed to.

These partial facts, together with Maud Slye's comprehensive scientific work in connection with cancer in mice, are illuminating, and represent some of the tireless efforts that have been extended to fathom the cause of cancer, and yet, we do not know why some people have cancer, and others do not.

Old age, with its epithelial degeneration and loss of regenerative powers, is regarded as exerting a favorable influence in the causation of cancer. Yet how often do we observe patients in the bloom of early adult life with hopeless gastric carcinoma.

The cause of cancer will undoubtedly be discovered, and when it does come, the biological chemist will have much to do with it, because cancer manifests itself in countless ways, waiting only for the latent, inborn influences in our body cells to receive the proper urge, whether it be irritation, infection or senility to initiate certain biological factors in the apparently normal cell, causing a reversion to the primitive type of cell, by changes from the normal through stages of involution, with impairment of nutrition, and loss of functional capacity as described by Tiersch.

This nutritional theory was supported by Ribbert and harmonizes with the origin of cancer of the stomach, in isolated cells, separated in the

\*Read before Section on Surgery, Illinois State Medical Society, Moline, May 31, 1927.

snare of connective tissue in a chronically inflamed field. He also demonstrated secondary tumors as a continuous growth, through the blood and lymph, as well as cell emboli.

Clinical observation, concerning such distribution of cancer of the stomach, shows that about 20 per cent. are confined to the stomach until death occurs from perforation, obstruction or peritonitis. They compose a group favorable to operation with an increasing prospect of cure.

At this stage, cancer is not an incurable disease, and it is to this phase of gastric carcinoma to which I invite your attention.

Not the frank, open textbook symptoms of obstruction, the presence of a lump, inanition, anemia, cacheia and the vomiting of blood, as we have been taught to recognize as symptoms of cancer—because when they are present, the golden moment of opportunity has long since passed, and the merest tyro can diagnose it with his eyes closed, and very definitely foretell the approaching end.

Let us rather consider the early symptom of gastric discomfort which persists, or may even be temporarily improved under treatment. The patient with persistent indigestion, without a known cause, is entitled to have cancer excluded by a carefully taken history, gastric analysis, and a competent roentgenological examination, and exploratory operation if necessary.

It is quite possible today for a competent roentgenologist to diagnose gastric carcinoma, and foretell its operability in approximately 95 per cent. of cases, if backed up by a carefully written history. And if it is recognized before liver involvement, or peri-gastric glandular enlargement has occurred, a gastric resection or the clean wide removal of the carcinomatous tissue with the cautery, offers the patient at least a new lease on life, and prolongation of usefulness to which he is entitled, and not infrequently, a permanent cure may be effected.

In view of these well established facts, a revision of the textbook teachings, of the symptomatology of gastric cancer, would seem to be in order, and the importance of recognizing precancerous conditions stressed. And in this connection, knowing the baneful influence of recurrent local irritation, it would seem an act of wisdom to educate the laity, as to the proper foods, so as to minimize the insults to our

stomachs and lessen the invitation to gastric carcinoma.

The national association for the prevention of cancer is already doing a splendid work along this line, and a more concerted effort among the physicians in spreading this knowledge would eventually relegate cancer of the stomach to the position now occupied by tuberculosis.

A patient can have cancer of the stomach without pain, without loss of weight, without lumps, without cachexia and without anemia, in fact, they may have none of the textbook symptoms of cancer, and with nothing more than a persistently mild gastric discomfort. Within six months, six cases of inoperable gastric carcinoma, all under thirty-five years, have been diagnosed in our clinic, the roentgenograms showing a complete, or almost complete, blocking out of the pars media, by hopeless carcinoma, all of whom had only mild symptoms until a short time previous. And we are all no doubt familiar with the circumstances surrounding the death of the late Dr. Carman, who probably has pronounced "hopeless gastric carcinoma" in more cases than any man of his time. and yet who failed to recognize that he himself had a hopeless carcinoma, of the so-called silent area of the stomach. One of the largest surgical clinics in America reports that only one in four cases of cancer of the stomach coming to them is operable.

And in our own work, only one in twenty cases is operable. This means that these patients have had improper medical advice in the first place, that sufficient stress has not been laid upon early and persistent symptoms and that laxity has been exercised, rather than alertness, or the patient has been negligent in applying for relief.

Gastric analysis has not given us the help that it once promised for only in about one-third of the cases is it indicative of anything. In fact it has never been made quite clear why a pyloric cancer, where there are no acid secreting cells, should produce an achlorhydria, or why in cancer of the fundus, hyperchlorhydria occasionally occurs, and it seems that continuous gastric analysis, excepting as a routine, is not only valueless, but may even be detrimental to the patient, by producing mechanical irritation by retching and vomiting.

Physical examination is frequently negative. There may be no evidence of any sort, not even tenderness, to arouse our suspicions, but a care-



fully taken history will usually bring out a statement of a more or less prolonged, or recurrent stomach distress, and unless the cause can be *definitely* determined, the patient is entitled to a careful roentgenological examination by a competent individual.

Roentgenology offers the greatest benefit of any *single* means for arriving at an early diagnosis. Of course, we must differentiate between gastric ulcer and cancer and the characteristics are usually sufficiently definite to leave little room for doubt. For instance, ulcer, as you know, produces characteristically an out-pouching, or an additional shadow to the gastric outline, as opposed to the filling defect, or diminution of the gastric outline as seen in cancer. Too, opposite the ulcer niche, often is seen an incisura, which is not present in cancer. The peristaltic waves do not pass either lesion, but are most sure to be stopped by cancer. Under the screen, a sharply tender point can usually be palpated in ulcer; the tenderness of cancer is usually less sharp and less focalized.

So long as the cause of cancer remains a secret, but we do have the means of checking or curing it when it is in the primary stage, let us lend our best efforts toward its prevention and diagnosing it, at a time when we can do our patients some good.

#### CONCLUSIONS

1. Cancer of the stomach may be prevented by educating the public to exercise discretion in the selection of its diet.

2. The recognition of precancerous symptoms and the institution of early surgical measures offers the only hope for the cure of cancer of the stomach.

3. Cancer of the stomach may occur without any of the text-book teachings of its symptoms.

4. Text-book teaching is in need of revision, and precancerous symptoms stressed.

5. Indefinite failure of health symptoms, in patients past forty, should have a gastro-intestinal x-ray, regardless of the presence or absence of stomach symptoms.

6. Practically all gastric ulcers in patients over thirty-five years should be surgical, because of the possibility of their being, or becoming, cancerous.

7. A negative x-ray examination, in the face of suggestive clinical findings, or symptoms, should demand an exploratory.

## CARCINOMA OF THE BREAST WITH ELECTRICAL RESECTION AND RADIOTHERAPY\*

B. H. ORNDOFF, M. D.

CHICAGO

The treatment of cancer is one of the very serious problems confronting all of the branches of medicine at the present time. For many years it seemed that surgery, the most rapidly developing branch of medicine, would greatly modify or possibly supply the cure for this malady. More recently, however, the youngest of all divisions of medicine, "Radiology," seems to have equaled, if not exceeded, surgery in the hope of producing a control for cancer.

It has been said that the surgical treatment of cancer includes all of the methods which have for their immediate or ultimate object the destruction of the growth. This definition would imply that radiological methods, as well as recognized methods in electrology, the actual cautery and many others, would be included under surgical treatment. It is evident that it is quite impossible to classify in a practical manner that which is surgical, electrical, mechanical and radiological in the treatment of cancer and such classifications are indeed unnecessary.

It should be the primary object of every physician to prolong life in comfort after a reliable diagnosis of cancer has been established and to institute any agent or method of proven value at his command to obtain this objective for the patient.

So much has been said and written on the advantage and the absolute necessity of cooperation between the radiologist, the surgeon and the physician in other branches of medicine, that it remains no longer a question with any one for discussion. Well coordinated cooperation is not always possible and practical. It remains then, for the radiologist, surgeon or physician in other fields to develop the means whereby he may institute the necessary measures in the cases which he accepts for treatment.

The knife, electrocoagulation, desiccation, electroresection, actual cautery and caustic chemicals are all well recognized agents for tissue destruction which may be used in conjunction with radiotherapy.

\*Presented at the Illinois State Medical Society, Moline, Illinois, Section on Radiology, June 1, 1927.

Radiotherapy began after the discovery of x-rays by Roentgen in 1895. Surgery today is the result of constant effort of many generations of well trained and carefully educated skillful men whose life work has been to elevate the standards of surgical practice to higher planes with each succeeding generation. It is obvious that the present state of development of the use of radiation in medicine lacks much in the way of refinements when compared with surgery. While the technique and physical problems of radiotherapy appear to have advanced by leaps and bounds in recent years, still, the radiobiological problems seem only to be well under way.

Cancer of the breast is one of the most serious problems of malignancy before us at the present time. Lazarus Barlow found metastases in 96.8 per cent. of all cases dying of carcinoma of the breast, while only 45 per cent. of all other forms of malignancy show metastases. From statistics we would conclude that about 33 per cent. of all cases of breast carcinoma would live about three years without any therapeutic intervention. Compiled statistics from literature show that about 39 per cent. will live three years with surgical intervention. The urgent need for some agent to extend the life of those affected with this terrible malady demands the use of every possible means known to modern science.

*Diagnosis of Cancer of the Breast.* One of the most important phases in the management of cases with carcinoma of the breast is securing an early diagnosis. There has been a fairly extensive campaign of education conducted throughout the United States for the past ten years and the results have been desirable. Cases far advanced appear in our clinic less frequently than in past years. Cases with but a very small lump in the breast represent a large percentage of all cases. The burden of responsibility belongs now to the physician. It is for him to decide with a reasonable degree of accuracy if the small lump in the breast is malignant. Inasmuch as cancer bearing breasts appear during the child-bearing period the disaster of destroying unnecessarily so useful an organ must be avoided if it is at all possible. However, failure to reach a decision early provides the possibility of a still greater catastrophe. From a study of the records of our clinic at the North Chicago Hospital it seems that about 50 per cent. of the cases who come

with a lump in the breast prove to be malignancy. When a positive clinical diagnosis has been made it has proven to be correct in more than 90 per cent. of cases. About 25 per cent. of the cases require more than the history and physical examination in order to secure a positive diagnosis. In the large majority of cases the picture of malignancy is drawn so plainly that there remains but little doubt of its presence. I refer to cases with retraction of the nipple, fixation of the skin to an indurated area, fixation of an indurated area to the chest wall or pectoralis fascia, axillary lymph node involvement, supra-clavicular infiltration, fluoroscopic evidence of pleural density, lung or mediastinal density, areas of bone decalcification, tumors in other organs, etc. There is no criterion which lends as much information, especially to the radiologists, as the "feel" of a tumor in the breast. Not only in the determination of malignancy but in determining its medullary character and in establishing a basis for judgment of the quality, quantity and method of administering radiotherapy. The feel of the tumor and the surrounding tissue must be ascertained. All tumors or breasts removed warrant a careful microscopic examination. The pathological report does not as a rule more than confirm the diagnosis of malignancy already established. Occasionally, however, we are obliged to wait for this report before a conclusion can be reached.

The classification of the growth is one of the most important parts revealed by the pathologist. The type of cells and intercellular tissues, a study of the vascular supply, the appearance of the areas of invasion and a study of the lymphatics, are points of very important consideration to the radiologist. The activity manifested by both the connective and epithelial tissue is also important. True sarcoma of the breast is very rare, but cases where the blending of these activities serve to warrant the classification of adenosarcoma are not infrequent.

Heredity is a factor in the diagnosis and prognosis of cancer of the breast cannot be disregarded. While it is true that information gained through the history of the average patient generally affords very little data upon which clinical deduction may be drawn, yet the hereditary character of malignancy in mice, as established by the experimental studies of Maude Slye, can no longer be seriously doubted. It is unfortunate



that we are yet so helpless in an attempt to study the heredity of malignancy in the human.

*Treatment.* The treatment of malignancy by surgical means has been one of the chief problems since the beginning of medicine. It is stated that in the Papyrus Ebers, probably written more than 1500 years before Christ, operations were performed for cancer of the breast and that in the history of this period and a little later operations were performed not only upon the affected breast but also on other involved tissues; probably cervical lymph nodes were resected. Cautery and escharotic pastes were also described as being successfully used by the medical men of that period.

The voluminous literature concerning the use of x-rays in the treatment of cancer of the breast seems to have been prefaced by my associate, Doctor Emil G. Beck of Chicago, who did this work as early as 1902 and whose published report appeared in the *New York Medical Journal* for that year. We owe a great debt of gratitude for his persistent efforts to combat this form of cancer and for the splendid example which marks his work in the useful coordination of radiological and surgical methods. I wish to refer particularly to the method of operation in which he advocates leaving the surgical wound open for the direct application of radiotherapy by both x-rays and radium to the deep tissues without the interposition and filtering effects of skin and overlying tissue.

The ranks of the radiologists have greatly increased in numbers since Beck recorded his early work and while contributions of inestimable value to the Science of Medicine have and are being laid down as the foundation stones for the Science of Radiology, still, much remains to be accomplished in perfecting this new branch of medicine. Statistical proof of the actual value of radiotherapy is at present unavailable. Proof of this character calls for much in the way of standardization of technique and equipment, a more perfect knowledge of the physical reaction of matter to radiation, as well as a longer time for the accumulation of clinical results and statistics.

From about 1918 to 1922 many radiologists attempted to institute intensive doses of highly filtered short wave length radiation to cases of breast cancer. A fairly wide variation in technique was established at different clinics. It soon became evident that complications were in

the nature of pleuritis, pulmonitis and pulmonary fibrosis with subsequent contraction of the thorax and misplacement of the thoracic viscera. The results were for the most part little or no improvement and in many cases it seemed that radiation accentuated the growth of the malignant disease. For the past five years there have been very few radiologists so heroic as to attempt to institute a "thorough or homogeneous" radiation to the thorax in breast carcinoma.

The plan of treatment which seems advisable in most cases at the present time may be considered a combined treatment. *First*—radiotherapy, *later* eradication by electrical resection including x-rays and radium, as well as the institution of measures intended to support the patient's general state of resistance and to detect at the earliest possible moment evidence of recurrence.

*Preoperative Radiation.* Preoperative radiation includes portals over the breast, the axilla, supra and infraclavicular spaces and in certain cases portals on the opposite side. The size of the filter and voltage is varied in accordance with the amount of subcutaneous adiposa. Great care is necessary to avoid too great depth dose to the thoracic viscera.

*Operation.* The operation of choice is the resection of the tumor whether it be in the breast or in the form of a recurrence or the breast itself. All of the skin overlying the tumor mass must be removed. As the tumor is being lifted away its base should be kept carefully covered with gauze in order to avoid expressing inoculating material from the tumor and transplanting it upon the cleanly cut surface. It is my plan to do the entire operation with electro cutting apparatus and to control all hemorrhage by electrocoagulation. When skin surfaces are approximated metal clips are used. Ligatures and artery forceps have been abandoned almost entirely. The narrow flaps formed when the entire breast is removed are held in position without tension by strips of adhesive plaster. The area beneath the site of the tumor is always left open for postoperative radiotherapy.

*Postoperative Treatment.* Postoperative treatment consists of radiation with x-rays and the direct application of radium into open areas. Ultra-violet applications are administered at intervals of every other day. The wound is dressed

at first with vaseline infiltrated gauze and later applications of 2 per cent. mercurochrome solution. After a granulation base has been established the skin growth is promoted by covering the margins with sterile adhesive plaster as advocated by Doctor Emil Beck.

#### SUMMARY AND CONCLUSIONS

1. Heredity is important in the etiology of breast carcinoma and its recurrences but it is our immediate purpose to prolong life in comfort.
2. The value of educational propaganda for the early detection of breast cancer cannot be over estimated.
3. Diagnosis before and after electrical resection is necessary in order to evolve the proper plan for postoperative radiotherapy.
4. Electrical resection for breast tumors, recurrences, or removal of the entire breast and axillary glands is the operation of choice for the following reasons:
  1. A sterile wound is created.
  2. Hemorrhage is decreased.
  3. Postoperative pain is less.
  4. There is practically no postoperative shock.
  5. Danger of metastases is reduced.
  6. Recurrence is less frequent.
  7. Aids postoperative radiotherapy.
  8. Better control of hemorrhage.
  9. Tissue not traumatized by hemostats.
  10. Circulation not mechanically deranged in the tissue flaps.
  11. Danger in the use of needles and sutures carrying innoculating cells into sterile tissue, as well as the creation of anemic zones is avoided entirely.
  12. Retaining points on metal clips scarcely enter the subcutaneous tissue, consequently approximate tissues with little damage.
  13. Time of operation is reduced.
5. Postoperative radiotherapy over open portals must have light filters in order to avoid visceral damage in the thorax.
6. By the use of methods presented in this paper I have hoped to add only the advantages of electrical resection to the surgical methods advocated by Doctor Emil Beck.

#### DISCUSSION

Dr. Emil Beck, Chicago, Ill.: This subject may be discussed from two points of view. First from the surgeon's standpoint and then from the radiologist's standpoint. I shall discuss the treatment only and no other phases of the subject. The most important thing, of course, is that the wound should not be closed because the radiation becomes inefficient when the skin has covered the area from which the breast has been removed. I have come to the conclusion that every case is hopeless in which recurrence has taken place. Therefore we must see to it that the first operation is successful. And I am convinced that we can reduce the recurrence in carcinoma of the breast far beyond what the present statistics all over the world show. Only thirty-three per cent. of all cases are living—after 5 years—is the average from clinics all over the world. This is deplorable. I think it should be just the reverse.

In my statistics of the last 8 years—something like eighty per cent. live after 5 years. Seven successive cases operated on in 1919 are without recurrence. I have shown these recently in the Chicago Medical Society. Since 1919 we have had only two cases of recurrence by applying this open method.

In regard to the question of preference to the radio knife, I have not used the radio knife, but I will say that if I had the skill in using it Dr. Orndoff has I should certainly employ it because it has many advantages. You have not nearly the hemorrhage. One does not need to apply so many forceps and the incision is clean.

Surgeons all over the world are very slow in adopting these new instruments because they are trained to do the work with the knife.

In cases such as Dr. Orndoff has shown, where recurrence has taken place, I think the cure is possible in a small percentage. My brother and I have employed the shoulder girdle resection in 8 such advanced cases. Of cases thus operated on four died within a short time after operation. Two lived; one eight years and one sixteen years. They are still alive without recurrence.

Now if I should be faced with a case like that I would think nothing short of a shoulder resection would be of any avail in any method.

The advantages of the open method are many, but the most important one, of course, is that of preventing a recurrence. It shortens the time consumed by the operation and radiation can be applied efficiently. A surgeon usually is very proud when he can show a perfect coaption of the skin by a new method of a flap; but alas! look at it about six months later with an extensive recurrence such as you have seen here.

No flaps should be used at all and the incisions should be left wide open. I leave the axilla open also. I guard the large vessels by putting a piece of lead against the vessels when the radium is applied. I advocate this principle not only in breast cases but in



all similar cases. The reason of good results in carcinoma of the cervix may be attributed to the direct contact of the radium to the carcinoma.

I have made the observation that wherever skin will grow over a granulated surface I can be sure there is no carcinoma underneath because a normal skin cell will never grow over a carcinoma cell. They are enemies and the skin cell won't protect the carcinoma cell. The normal skin will stop at the border of the carcinoma. If the skin covers the wound there are no carcinoma cells present. You can prove this by microscopic sections.

Dr. T. D. Cantrall, Bloomington, Ill.: How soon after operation does he begin radiation again?

Dr. Preston M. Hickey, Ann Arbor, Mich.: I would like to ask Dr. Orndorff the interval of time he has allowed to elapse between the preliminary radiation and operation.

Dr. P. B. Goodwin, Peoria, Ill.: I would like to ask Dr. Orndorff whether in that case he showed as his inflammatory type, developed a generalized nodular process over the chest and back as they sometimes do.

#### WHO STARTED THIS FOOL THING?

##### SPARE THE SPANK AND—

A spoiled child who had stirred up several neighborhood quarrels by telling what he heard his father and mother say of their "friends," was spanked and put to bed. Mother relented and came to console him.

"Mother," he sobbed, "did grandpa spank father when he was a little boy?"

"Yes," answered his mother positively.

"And did great grandfather whip grandfather when he was little?"

"Yes."

"And did great-great-grandfather whip his little son?"

"Yes."

"Well, who started this fool thing anyway?"

##### A REGULAR GO-GETTER

Those who regard the present as far ahead of the past in efficiency will have to make an exception in favor of the Nevada undertaker who was a regular go-getter. He won his fame in the early rough and ready days when the five undertakers of the booming mining town were kept fairly busy. This famous man had initiative, personality, perseverance and knew when and where the psychological moment arrived. To illustrate:

One day when the parson was preaching a funeral sermon over one of the efficient undertaker's patrons, two shots were fired almost simultaneously in nearby saloons. The undertaker spoke quickly to his assistant and hurried out. Before the sermon ended he was back in his accustomed place, appropriately solemn and sympathetic. Out of the corner of his mouth he whispered to his assistant: "I got both them funerals."

#### ARTICULAR AND JUXTA-ARTICULAR FRACTURES\*

HENRY BASCOM THOMAS, M. D., F. A. C. S.

Professor of Orthopedic Surgery, University of Illinois

CHICAGO

The title of this article could well be "Preventive Orthopedic Deformities," for its object is an attempted analysis of causes of poor fracture results in the hope of creating interest which may clarify and improve treatment. The final results on joint fractures here spoken of were seen in those clearing houses of bone and joint deformities, the orthopedic clinics and dispensaries, where patients dissatisfied with their original treatment because of continued pain, impaired or lost function, or deformity, are sent. These patients come mostly from the general practitioner but frequently also from the surgeon, industrial or orthopedic. Here are seen most of the bad fracture results, the failures as far as treatment is concerned, whether through faulty technique or because of noncooperation on the part of the patient.

While appreciating that the majority of treated fractures terminate excellently, our attention should nevertheless be focused on the faulty results, and the study to clarify and improve treatment must draw its material from chronic bone and joint cases.

Fairly definite and fixed conclusions have suggested themselves respecting the reasons underlying this necessity for fracture patients to seek continued treatment in bone and joint dispensaries, though there are undoubtedly many errors made in the calculations by viewing the problem from this angle. It is nevertheless to be hoped that an abbreviated preliminary statement concerning the findings made possible from these observations, will stimulate interest and probably enlist the observational and literary productiveness of many of you, better equipped personally to contribute to the solution of this important preventive medical problem. Please note that nothing new is claimed except personal conclusions from experience. Only apparently minor points in the principles of technique and treatment are emphasized.

Let us first consider: Strains in the region of the distal end of the radius.

\*Read before the Section on Surgery, Illinois State Medical Society, Moline, June 1, 1927.

The material observed over a period of twenty-four years leaves the impression that far too many fractures into the wrist joint are diagnosed as strains. That is, recognition of the condition present is not made, either by the physician or the patient. Now the healing of a non-fracture strain does best with early guarded active motion, that is, physiological massage. This is because the periosteum and bone are not injured in a strain and there is consequently no production of excess callus on account of motion. But *in the presence of a joint fracture* function is often diminished for life when too early active motion is permitted. Therefore, every strain about a joint must be positively differentiated from a fracture before treatment is instituted. This may sound trifling, but it is of the utmost importance. Should the profession succeed in educating the public to thoroughly understand that every supposed strain or bruise about a joint should be regarded as a possible serious condition and given a careful examination by a physician, also that the opinion and advice of the neighbors must be disregarded, then many traumatic stiff joints, prematurely arthritic wrists, and bone destroying tumors with pathologic fractures would be placed under intelligent observation early, and thereby many such conditions would be prevented.

Let us next consider: Fractures of the radius near or into the wrist joints.

The impression made by the unfavorable end-results in those Colles' fractures brought in at the end of weeks or even years after their initial treatment, is as follows:

In one group of cases, actual reduction of the fracture was never accomplished. Too many cases fall into this class. I am convinced that in some of these unreduced cases, the physicians manipulating the fractures believed that reduction had actually taken place and applied the cast or other forms of retention to them. Callus rapidly develops in these cases and the best opportunity for a good result is forever lost. The fact that so large a percentage of the fractures are not handled properly in the beginning constitutes a serious indictment of both the knowledge and the technique in our profession with respect to a type of injury that is certain to arise in the experience of practically every doctor.

Even the most skillful fingers cannot be trusted with the final verdict regarding the suc-

cess of manipulation of the fragments of any fractured bone, especially Colles'. It is not amiss to frequently emphasize the imperativeness of using x-ray films as a final judge of the position of the fragments. These films should be taken in spite of the fact that the doctor's clinical evidence insures him of perfect reduction. One film photographed in one plane and another film photographed in another plane is absolutely essential. It is best to take them while the patient is still under the anesthetic. Two additional films must be taken in a few days to determine whether the fragments have slipped from their previous position.

In another group of cases, the fracture was reduced as shown in some of the cases by the x-ray and in others by the history, but retention was not efficient.

Finally there was evidence of faulty release in many cases, and the presence of strain, callus, and bony block.

Would it be intruding upon the indulgence of such an audience as this if a few words were said about the time worn subject of Reduction in Colles'? Any impaction should be positively overcome, keeping in mind the frequent rotation of the fragment, either of which conditions shorten the radial styloid, disturbing the relation between it and the ulna styloid, also destroying the mechanically perfect extensor tendon osseous-groove wrist and finger function. Indications suggest that some of these bad results followed in cases where the attempted reduction consisted in the physician grasping the patient's hand, trying to make extension through the chain of small carpal bones, and stretching the wrist tendons and the radio-carpal ligament, at the same time producing ulna deviation. Such treatment is outlined in many text books. This procedure is only masking the characteristic silver fork deformity and the anterior prominence of the head of the ulna, masking them, not actually breaking up the impaction and setting the fractured fragment back in its right relationship to the joint, but only making the wrist appear as though this were done.

Let us grant that many practitioners are skillful enough to reduce a Colles' by indirect traction and manipulation without anesthesia. The wider their experience the more readily they admit that direct or skeletal traction is more effi-



cient and should always be used, provided it can be as easily applied. Many fresh cases of fracture, rightfully and naturally fall into the hands of young physicians. Why not, therefore, emphasize to them the near skeletal method of Jones, and even go a step farther by entirely discarding the faulty method of hand-in-hand traction and manipulation? Either the thumb, or better, the styloid processes of the navicular bones may easily give efficient near-skeletal push, which is the same as extension or traction, and pronation rotation to the radial fragment, readjusting the bony grooves and ligaments and the styloid processes, eliminating the silver fork deformity and the ulnar head prominence.

The Thomas wrench is reserved for a small number of stubborn, fresh cases and for the attempted reduction of chronic deformity in the bad end results. In manual or wrench near-skeletal traction, *respect for the tissues* must be emphasized. Such consideration will reflect the best end results in the quickest time with a minimum of hemorrhage and the least excessive irritation, callus, and nerve injury. *When carefully and completely reduced*, due respect being given the tissues, this fracture usually remains in its proper position and needs only well-devised retention in its normal position.

The extreme volar ulnar position, that is extreme pronation, ulna-deviation and palmar flexion puts strain on the parts, is an inducement to excessive callus and bony block. It is infrequently needed when the reduction is properly and accurately accomplished. It should, therefore, if used at all, be reserved for those stubborn cases whose fragments refuse to remain in place and should not be recommended for routine retention of Colles'. When used the position should be changed within a week and a more normal attitude accepted.

Comment on the release or after care of this fracture was indicated by our material and is very important. Neglect of attention to this matter of release and to after care in properly reduced cases, is the cause of slow returning function.

Each of these fractures should be seen daily for three days so that proper circulation and pressure control may be guided. Early semi-release from the splint for short intervals, fre-

quently on the third or fourth day, and immediate active finger motion with guarded active wrist movement, massage and heat, improve the prognosis. The splint should be discarded in three or four weeks.

Now regarding fractures of the elbow, shoulder, hip, knee, ankle, spine, carpals, metacarpals, and phalanges, kindred impressions, varying with the particular joint, have accrued from the material but need not here be mentioned. Their recitation would emphasize a general absence of thorough knowledge or application of the five big R's or essentials to which attention should be given by the physician in the treatment of fracture and upon which we have been briefly commenting, that is:

1. Recognition
2. Respect
3. Reduction
4. Retention
5. Release (physiotherapy).

More efficiency in the management of fractures is therefore indicated by the study of this chronic material and it must be brought about by better education of medical students, nurses and licensed physicians along these particular lines.

The medical schools are each year improving their methods of teaching fractures, as are the hospitals. This is especially true in your state hospital, the Educational and Research Hospital, in Chicago. In the hospitals, fractures are being more and more segregated to splendid advantage for the patient, physician and interne. Also the question of reaching the practicing physician for review of the subject and for presenting to him new ideas and developments is being solved excellently by the actual practical demonstrations of fracture treatment at our Medical Society meetings.

Let us insist on the teaching of more actual splint application and fracture reduction, in a laboratory manner, and let us thoroughly familiarize our students with abundant clinical material, in the hope of diminishing bad fracture results and of eliminating the suffering and deformity that are at present of all too frequent occurrence among fracture patients.

30 N. Michigan Ave.

# STUDY OF GOITER CLASSIFICATION AND NOMENCLATURE AND THEIR RELATION TO IODINE THERAPY\*

JAMES H. HUTTON, M. D.

CHICAGO

We know comparatively little about goiter. We are largely ignorant of its etiology, though we know that the thyroid is intimately concerned with iodine metabolism and that iodine is of value in the prevention of some kinds of goiters and the pre-operative treatment of others. In many cases we cannot correlate thyroid pathology and the symptomatology of goiter. For example, acinar hypertrophy and hyperplasia is characteristic of exophthalmic goiter, but the pre-operative use of iodine may reduce the gland to the resting state so that a section of it removed at operation cannot be differentiated from diffuse colloid goiter.

In this state of uncertainty it would seem that the nomenclature and classification should be as simple as possible. The need for one simple classification for general use is best shown by considering that there are more than twenty classifications in the literature. No criticism is implied for any of these classifications, but their multiplicity speaks for itself.

With this in mind the writer selected from the literature a simple classification into the terms of which any of the more complex classifications can be translated. This was sent to the heads of the departments of medicine and surgery of the medical schools of the U. S. and Canada with a letter which read as follows:

"Because of the large number of terms and the diversity of classifications offered, I am making inquiry from the leaders in medicine and surgery in this country and Canada regarding the classification which they use in their daily work.

"I am quoting below a very simple classification.

- I. Diffuse Colloid
- II. Adenoma
  - (a) without hyperthyroidism
  - (b) with hyperthyroidism
- III. Exophthalmic

## IV. Tuberculosis, syphilis, thyroiditis, malignancy

"In your opinion would this classification be of value to the general practitioner who sees goiter and devotes his attention to it only as part of his day's work and not as a thing to which he devotes special attention or with which he is especially familiar?"

No claim is made that this is the best classification to be found or indeed that it is superior in any way to others appearing in the literature. The only thing urged in its favor is that it is very simple and can be quickly and easily learned. If every doctor on the continent understood it the profession would speak one language regarding goiter, which would be a decided advantage over the present Babylonian-like confusion.

One hundred and forty letters were sent out. Sixty-seven answers were received. The interest in this problem is indicated by the large percentage of replies received. Twenty-five per cent. is considered a very good return of answers to such letters. In this case fifty-one per cent. of replies were received. Of these fifty-two felt that this classification might well be adopted by the rank and file of the profession. Six were definitely opposed to it and nine said nothing about it but merely indicated the classification they were using in their own work.

The terms in this classification refer to gross pathology determined by the palpating hand before operation. The diffuse colloid goiter refers to a smooth uniform enlargement involving the entire gland, no nodules being visible or palpable. The gland has a smooth globular feel and only occasionally are there slight or fleeting signs of hyperthyroidism.

The adenoma refers to a gland containing one or more nodules either visible or palpable. Or the enlargement may involve only part of the gland. There are times when nodules are situated deeply in the colloid goiter and their presence cannot be demonstrated until the gland is considerably reduced in size.

The adenoma with or without hyperthyroidism refers, of course, to the functional activity of the thyroid. The tendency of all adenomatous goiters is to become toxic; this tendency increasing greatly after the twenty-fifth year.

In December and January last I sent to the

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same men to whom the classification had been sent a questionnaire regarding the use of iodine in the treatment of goiter. A letter of explanation accompanied the questionnaire. This letter was written on the stationery of the Scientific Service Committee of the Illinois State Medical Society and read as follows:

"It is realized that this discussion of iodine and goiter covers the field but superficially. If the rank and file of the profession were acquainted with the few facts enumerated here it is believed they would be in a better position than at present.

"Many men feel that the use of iodine is good treatment for some forms of goiter. Being uncertain as to the varieties in which it is useful they give it to all goiter patients, not only as a pre-operative measure, but for indefinite periods of time. In these cases it loses its value as a pre-operative measure so that the patient's chances of recovery are minimized.

"Goiter is a very live subject in our society because of the large number of goiters in Illinois, more particularly in that section of the state lying in the Great Lakes basin. A questionnaire is being sent to the foremost teachers in the United States and Canada in the hope that we may discover a few facts on which the leaders of the profession are agreed which we can pass on to our county societies. For your convenience a 'yes' and 'no' is arranged after each question. If you have the time to go into these questions in greater detail we shall appreciate your attention."

Sixty men replied to the letter. Twenty-three states and three Canadian provinces were represented in the answers.

One man felt that too much information was asked for and so answered none of the questions.

One man did not handle goiter cases and consequently felt himself incompetent to answer.

Two men did not believe their experience was sufficiently broad to permit them to answer.

This leaves fifty-six men who returned answers which are tabulated as follows:

Question No. 1: Do you believe that iodine should not be used as a public health measure in the water supply or table salt?

Forty-five men indicated that they were opposed to the use of iodine as a public health

measure in the water supply or table salt of a community.

Nine felt that it might be used in some cases and under certain circumstances.

Two men who replied to the questionnaire failed to answer this question.

Of the nine who believed it might be used one man felt that the use of iodine in the water supply should depend on the definite showing of iodine deficiency in that locality, the o. k. of the State Medical Society, if it were a statewide question, and of the County Society, if it were a county question.

Another felt that it might be used in the water supply for children and in table salt by adults only on the prescription of a physician.

Another felt that it might be used if carefully controlled by a medical man.

Question No. 2: Do you believe that public health agencies should restrict their efforts in the goiter field to educational propaganda?

Forty-six men felt that public health agencies should restrict their efforts to educational propaganda.

Three were distinctly opposed to this idea.

Six felt that while this restriction should be the rule, there might be certain exceptions.

Question No. 3: That they should explain to the laity that goiter is many times a preventable disease or condition: that many cases can be easily cured if properly treated early?

Fifty-three felt that this information should be disseminated to the laity.

Two qualified their answer but agreed in the main with this idea.

Question No. 4: That treatment should be left to the private physician who has opportunity to make a more careful and detailed examination than can or should be made by public health authorities?

Forty-nine felt that treatment should be left to the private physician.

Six favored this but felt that there might be occasions when public health agencies might enter the field.

Two were opposed to this idea in part.

Question No. 5: For the guidance of the average doctor who sees only an occasional goiter case as part of his day's work, do you believe it would be wise to disseminate the idea that

iodine is good treatment only for the diffuse colloid goiter?

Thirty-four felt that it would be wise to disseminate the idea that iodine is good in the treatment of only one variety of goiter—the diffuse colloid.

Six agreed with the idea in part.

Ten were definitely opposed to it.

Four were dubious as to the wisdom of it.

One omitted answer.

This question was intended to convey the idea that the field of iodine, as a curative measure in the treatment of goiter, is limited to the diffuse colloid variety and that all others should not be subjected to it, except as a pre-operative measure, as indicated by the succeeding questions.

One man voted "no" and stated "There is no average doctor."

Another said iodine should only be given by "those having definite knowledge of what results to expect."

A leader from the Pacific coast voted "yes" and in a letter amplified his answer by the statement, "In the goiter clinic where we have patients under observation for a long period of time we have entirely discontinued the use of iodine in the treatment of colloid goiter because of its inefficiency. We are using desiccated thyroid for the purpose of putting the thyroid gland at rest. Then after it is reduced in size we give the ordinary preventive iodine. We have observed patients with small colloid goiter treated both with desiccated thyroid and iodine over periods of time, varying from six months to two years. Desiccated thyroid was uniformly efficient, while iodine usually was not. Care must be taken in making a diagnosis between early hyperplasia both of the cellular and acinar (adenomatous) types, as these do not yield to treatment."

This coincides with the writer's feeling on this subject. But if there be a field for the use of iodine as a treatment it might be in the variety under discussion.

Question No. 6: That the adenoma without hyperthyroidism should never be given iodine because of the great danger of converting it into an adenoma with hyperthyroidism (though an occasional case may improve on it and a few may not be made worse by it)?

Forty-eight were of the opinion that iodine

should not be given to the adenoma without hyperthyroidism.

Two were undecided on this point.

One omitted an answer.

Four qualified their answers as follows:

"No, I don't view adenoma other than localized overgrowth. The etiological factor is the same."

"Absolutely yes."

"No, not possible."

"No, I'd leave it to the judgment and experience of the doctor with reservations in the case of physicians competent to assess the risk," etc.

Question No. 7: That iodine should never be given to the adenoma with hyperthyroidism except when the patient is in the hospital and then only for five to twenty days as a pre-operative measure?

Forty-six men felt that iodine should be used only as a pre-operative measure.

Three were uncertain on this point.

Four were of the opinion that it was never indicated in this variety of goiter.

One man who does a great deal of goiter surgery in the middle west wrote, "And the wise surgeon will rarely use it then."

One man stated that he had given it to hundreds of cases of this type, but had never come to any conclusion regarding its effect in this group of cases.

Another said, "I doubt the use of iodine in this type of case even as a pre-operative measure."

Question No. 8: That an adenomatous or asymmetrically enlarged thyroid with hyperthyroidism is always a surgical condition?

Forty believed this to be a surgical condition.

Six were unqualifiedly opposed to the idea that this is always a surgical condition. Three of these were surgeons.

One felt that an absolute "yes" or "no" was not possible.

One said "yes and no; there may be many other factors to decide."

Two said "yes, usually."

One surgeon said "yes" to the adenomatous thyroid and "no" to the asymmetrically enlarged thyroid.

Another felt the last six questions should be individualized and the patients seen by a specialist.



Another felt that the x-ray sometimes cured these cases.

Three did not answer this question.

Question No. 9: That an adenomatous or asymmetrically enlarged thyroid with hyperthyroidism is one of the most confusing goiters with which the practitioner is confronted because it is so frequently confused with heart disease, nephritis, high blood pressure, and "nervous breakdown," the presence of a small goiter being frequently overlooked entirely or its relation to the major syndrome being misinterpreted?

Fifty-four agreed unqualifiedly with the opinion expressed in the question.

One was uncertain and one omitted the answer.

This question was intended to direct attention to the thyroid in the conditions mentioned. The writer feels very sure that in these cases the presence of a small goiter is frequently overlooked or its relation to the major syndrome misinterpreted.

Question No. 10: That iodine is of value in exophthalmic goiter only as a pre-operative measure and only on one occasion. That is, while it will cause a remission of symptoms once it will rarely do so the second time, so that its use should be restricted to the pre-operative period of five to fifteen days?

Forty agreed unqualifiedly.

Six agreed with reservations.

Five disagreed with the idea expressed in the question.

Three disagreed with some qualifications.

Two were undecided.

In order to more clearly orient some of the answers and to present more accurately the viewpoint of some of the men, a few letters that accompanied the questionnaire are quoted. One man wrote:

"Of course, questionnaires are very unsatisfactory. You have worded these questions allowing a more satisfactory answer by "yes" and "no" than is usually the case, and yet the problem is so complicated that even these questions are hard to answer.

"Personally, we try out iodine for one week in every kind of goiter with symptoms unless accompanied by evidence of myxedema, in which case, of course, we use the thyroid gland itself, and at the end of a week by the patient's feelings,

pulse, etc., make up our mind whether or not to continue; but we use only 3 mm. of Lugol's twice a day and so avoid the danger of the rather large doses."

Another said:

"I have answered your questionnaire on goiter and while the answers throughout are in the affirmative, local or case circumstances might, under their special conditions, modify these answers."

Another:

"Enclosed you will please find my replies to your questionnaire. Amplifying those replies I should like to say in answer to question No. 1 that I do not believe that municipal or state authorities should be allowed to treat a public water supply until exhaustive chemical analysis has shown conclusively a deficiency of iodine content and further safeguarded by approval of the State Medical Association if the question be a statewide one, and of the County Medical Association in municipalities.

"In answer to question No. 5: We must realize that the 'average doctor' is a doubtful authority as to the diagnosis of 'diffused colloid goiter,' by which I understand you to mean adolescent goiter. Adenomas are sufficiently frequent in children of this age to make one look askance at a general advice of this nature.

"In answer to question No. 7: I have stated that I do not believe that iodine is indicated in a toxic adenoma, whether in or out of the hospital and without regard to the number of days preceding operative procedures. It is my opinion that iodine is absolutely contra-indicated in all toxic adenomas except perhaps in the rather unusual combination with exophthalmic goiter.

"Question No. 8 raises the question of making all toxic adenomatous thyroids subject to surgical intervention. In the majority I believe that surgery is the more preferable method of treatment for these conditions, but it cannot be made an infallible rule. The degree of toxicity, the age of the patient, the presence of other conditions, which make surgery undesirable, may put a small per cent. of these cases into a group where galvanism, x-ray exposures or rest with ice bag may be indicated. It has been my experience that nearly all toxic adenomas which I have seen treated by these measures will, though they

improve for a time, present subsequent evidence of toxicity."

Another man says:

"The problem of the use of iodine in these cases is subject to a considerable amount of debate and is more important to you where goiter is endemic in your locality than with us where it is only occasional. Nevertheless, I have seen much harm arise from its injudicious use and it seems almost impossible to convince some members of the profession that damage can arise from its use."

Another one:

"No doubt the public health agencies should restrict their efforts to educating propaganda rather than the advising the use of iodine in various forms. This no doubt has done a great deal of harm. Furthermore, the benefit to be derived from the use of iodine when hyperthyroidism is present is somewhat questionable. Its use should certainly be restricted to a limited period and then under strict supervision preparatory to the operation."

Another:

"At this state of our knowledge I find it difficult to give a categorical answer to all those questions. Much work will have to be done before our knowledge regarding the connection between iodine and thyroid is complete."

The Dean of one school wrote: "I have wished to see that the opinion which I expressed was in fact the joint opinion of my colleagues here. The only question which I felt unable to answer 'yes' or 'no' is question No. 4, which I have marked with a circle, somewhat extending my opinion at the bottom of the page. Otherwise, to me the questions are more or less clearly stated and should, I think, receive wide assent."

This school is in a goiter zone. The extended opinion reads, "I think the school physicians are now in a position to deal with goiter in children more effectively than are private physicians. I, therefore, raise the question as to whether this should not be regarded as an exception under this heading."

#### CONCLUSIONS

In the main it is agreed that iodine should not be used as a public health measure in the

water supply or in table salt. Public health agencies should limit their activities to educational work.

Treatment should be left to the private physician.

Iodine should practically never be given to the adenoma without hyperthyroidism and should be given to the adenoma with hyperthyroidism only as a pre-operative measure. Many men do not believe it should be given even as a pre-operative measure to this type of goiter. Certainly its action in this type cannot be foretold, as it usually can be in the exophthalmic variety.

In the latter most men feel that iodine should be reserved for use as a pre-operative measure and that it has a good effect but one time. A number of men feel that this effect may be repeated and one felt that it may sometimes apparently effect a cure.

In closing I would like to emphasize the wisdom of always investigating the thyroid in cases of "nervous breakdown," hypertension, nephritis and heart trouble.

#### DISCUSSION

Dr. H. V. Gould, Chicago: Dr. Hutton's paper is of unusual importance, especially at the present time when we are trying to wake up the profession, educators and public health officers to the pernicious effects of the universal use of iodine as in iodized salt, iodine in drinking water, milk, etc. We know very little about goiter, but we do know that iodine affects its activity. It may reduce or increase activity of the thyroid in the same patient at different times; it may even change the appearance of a section from an exophthalmic type to a diffuse colloid type. With iodine we may prevent goiter, kill or greatly assist in the cure of a patient, depending upon the type of goiter with which we have to deal, so that the first consideration in the treatment is a very careful diagnosis and classification. In this Dr. Hutton's classification is of great value because of its simplicity and inclusiveness. We should strive in every way possible to make the public realize that enlargements of the thyroid should not be self treated; we should know ourselves where iodine should or should not be used. Indications for the use of iodine in thyroid conditions are 1, children under the age of puberty, especially in goiterous regions, of which this Great Lakes district is a part; 2, at the age of puberty, if the goiter is of the diffuse colloid type and we are sure that there are no fetal adenomas present; 3, as a pre-operative measure in exophthalmic goiter and in most cases of toxic adenomata, very closely observed; 4, as a post-operative measure, usually for a few days; 5, in some cases of



severe hyperthyroidism where surgery is impossible either through lack of consent or advisability; 6, sometimes in pregnancy, to prevent goiter in the fetus. Contra-indications are: 1, exophthalmic and adenomatous goiters over long periods of time, and where no surgery is intended (with certain exceptions); 2, adults who cannot be supervised and observed as to weight, pulse, etc.; 3, after thyroidectomy, except where hypothyroidism exists, and during the first few days following operation; 4, as a general health measure for a whole community. Dr. C. L. Hartsock reports that for six months during 1925, at least twenty-five per cent. of the cases of hyperthyroidism operated upon at the Cleveland clinic were induced by the use of iodine.

Dr. E. P. Sloan, Bloomington: Every man has his own classification of certain terms, because his conception of etiology is a little different. There are some terms and classifications, however, that I think we should try and get away from and one is hyperthyroidism, which is used not only to mean excessive normal secretion from the gland, but also abnormal or toxic secretion. I think that hyperthyroidism should be reserved for excessive normal secretion from the gland. I think we are all convinced that in exophthalmic goiter the secretion is entirely abnormal. In toxic adenoma we believe the toxemia comes from two different general causes, viz.: hyperplasia and absorption of the products of degeneration. The hyperplastic type is benefited by iodine temporarily, while the other type is usually made worse. If we will keep in mind that there are two general groups of toxic adenomata and that one type is benefited by iodine and the other type is markedly made worse, I think that will settle the question as to whether the use of iodine is indicated.

My objection to iodine salt is that it is unscientific. Even if it were all absorbed and you could control the amounts to the individual, I think that it would still be unscientific. I think that it should be always under the control of the physician and that applies to the other mineral elements of importance in the body as well as iodine.

Dr. Hutton's classification is very simple. I think that what should be stressed is the classification of the simple diffuse colloids. A great many can be cured by iodine, thyroid extract, hygiene, and other measures in the early stage, before they progress to the next or nodular stage. All the simple colloid goiters are incipient adenomatous goiters. I think that all public health men should be interested in the cure of early goiter but should be more interested in prevention. Surgeons and internists should cooperate with the public health men and try to prevent goiter because certainly a very large percentage of the simple colloid goiters can be prevented, and if the simple colloids are prevented or cured, the incidence of serious goiter will be greatly reduced.

This is an important field that belongs in great measure to the men in public health work.

## THE MANAGEMENT OF THE ASTHMATIC\*

SAMUEL M. FEINBERG, M. D.

Associate in Medicine, Northwestern University Medical School;  
Attending Physician, Cook County Hospital; Attending  
Physician, Washington Park Community Hospital

CHICAGO

There exists among the medical profession a state of confusion regarding the subject of asthma. It is the exceptional physician, indeed, who will follow his asthmatic patient, step by step, in a logical manner, through the details preceding the treatment and then take up the treatment itself in an orderly way. The average physician's attitude is to make a quick diagnosis and then to treat the patient with his favorite method. And each man, or group of men, has his favorite method to which he adheres religiously no matter how different the various asthmatics may be. The literature teems with examples of the above. One author confines himself entirely to management from the standpoint of sensitization; another pays attention practically only to foci of infection; a third advocates vaccine treatment to the exclusion of everything else. Then there are the actino-therapists, the tuberculin enthusiasts, the advocates of non-specific protein therapy, the roentgen-ray supporters and numerous others. Little wonder is it then that the practitioner has become confused and discouraged.

It is my purpose in this paper to show that there is little need for this chaotic feeling. It is my object to outline the systematic, orderly method of managing an asthmatic from the first consultation to the last treatment. At the outset it may not be amiss to remind you that the management of the details of history and examinations are just as important as the details in therapy. This paper is based chiefly on a study of a group of approximately 400 asthmatics, including clinic and private patients, all of whom have been definitely followed up both as to diagnosis and treatment. I will make no attempt to present statistical data at this time.

Let us now take the patient as he consults us in the office and lead him through the steps necessary for a successful result. I will make no attempt to describe the minute details of the various steps in diagnosis and treatment, but

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will merely present a skeleton outline which will enable the practitioner to intelligently pursue this course.

*History.* A close inquiry into the patient's complaints is the first procedure. The typical asthmatic will practically always give a history of the attack consisting of tightness in chest, dyspnea, cough and expectoration, in the order mentioned. The age of onset of these attacks is of corroborative evidence, as the true allergic asthmatic's attacks begin early in life and practically always before the age of forty. An inquiry into the season of the year in which these attacks occur should never be neglected as it may point to the offending substance.

The possible association with house pets, such as cats, dogs, canaries and parrots is next inquired into. The occupation of the patient may be of extreme importance and should never be ignored. Inquiry should be made concerning objects in the patient's home which may play an important part in the discovery of the cause of the individual's attack. A hair mattress, or feather pillow, or an oriental rug may be the source of the trouble. The composition of many of our common household articles is ordinarily not understood and many a case of asthma is due to some material of which we have no suspicion that it enters into the make-up of common objects in the home.

The previous illness of the patient may have an important bearing on the present condition. If the dyspneic attacks followed a respiratory infection or pneumonia the probabilities are that we are dealing with the bronchitic type of asthma. The allergic asthmatic will very frequently give a history of having, or having had, other forms of manifestations of hypersensitivity such as eczema, urticaria, hay-fever, or hyperesthetic rhinitis. In about 50 per cent. of the cases there will also be obtained a family history of allergic disease.

*Physical Examination.* Having obtained the above information we proceed next to examine the patient. In the chest during the asthmatic attack there will be found generalized, coarse, musical rales. If the attack is severe there may be marked hyperresonance or percussion. When the asthma has been severe and of several years' duration there will often be typical emphysematous changes. In the intervals between the

attacks in the uncomplicated case it may be impossible to diagnose asthma from the physical examination.

Pulmonary tuberculosis must be carefully considered in the individual patient, as the association of the two diseases is not at all uncommon. Aortic disease must be ruled out because of the frequency with which spasmodic dyspnea is associated with it. Other forms of cardiac disease which may be responsible for spasmodic dyspnea can generally be ruled out by careful examination of the heart. Shortness of breath due to emphysema or chronic bronchitis, although difficult to differentiate from the physical findings alone, can usually be eliminated by an evaluation of the history together with the results of the examination. The persistent thymus or substernal thyroid as possible causes for spasmodic dyspnea can be ruled out by percussion of the upper sternum and by roentgenoscopic examination.

Examination must not be confined to the chest. The importance of this lies not only in the discovery of other pathologic states but in the observation of conditions which may have an important bearing on the asthma. The ordinary sites of focal infections such as tonsils, dental apices, and sinuses, should always be carefully investigated, as they may be the cause of bacterial sensitization or by their presence predispose to sensitization by other agents.

*Laboratory Findings.* After the physical examination has been completed the next step is to do the essential laboratory work: a blood count, urine analysis, Wassermann test, sputum examination, and roentgenogram of the chest. In allergic asthma there is usually an eosinophilia, sometimes as high as 20 per cent. The Wassermann test is of help in diagnosis chiefly of syphilitic aortitis or syphilis of the lung. The urine examination will help to exclude other sources of dyspnea such as the acidotic dyspnea of diabetes or advanced renal disease. In doubtful cases blood chemistry determinations should be made.

The sputum is examined in every instance. Of significance in the sputum are the finding of Curschman spirals and eosinophiles. The stained slides are carefully examined for tubercle bacilli. Another slide stained by Gram's method is ex-



amed for the bacterial flora, and in certain cases the flora is more thoroughly investigated by cultures. The organisms most commonly found are the staphylococcus, streptococcus viridans, pneumococcus, micrococcus catarrhalis, micrococcus tetragenus, and bacillus influenzae.

At the same time fluoroscopic and roentgenoscopic examinations of the chest are made. The things of special importance to be looked for on these examinations are cardiac disease, aortic disease, localized tuberculous markings, dense shadows due to abscesses or lung tumors, signs of bronchiectasis, and enlarged peribronchial glands. In the early uncomplicated case of asthma there are practically no lung changes on the film. Later it may show evidence of peribronchial infiltrations.

*Diagnostic Skin Tests.* The completion of the history, physical examination and laboratory tests has determined at this stage the presence or absence of asthma and has indicated the probable allergic nature of the case. It remains, however, to determine the exact etiological diagnosis, i. e., the particular protein or proteins responsible for the asthma. This is, as we all know, a very tedious and laborious procedure and oftentimes it is a great disappointment when all the tests have been found negative. It would be extremely useful, therefore, to be able to judge at this stage before making the individual skin tests, whether a positive reaction is to be expected. For this purpose the author uses a preliminary test originally described by van Leeuwen which has so far been positive in all allergic asthmatics and negative in others. This test consists of the introduction of .02 c.c. of an extract of human dander intradermally. A positive reaction in the form of an urticarial wheal indicates the allergic nature of the case and gives promise of obtaining positive reactions to some of the individual protein extracts.

When a positive reaction is obtained (and for the present in all other cases) the patient is tested with the individual protein extracts with which it is reasonable to suspect that he may come in contact. It is useless to make tests with materials which we know definitely to be excluded from the individual's environment or dietary. However, oftentimes we neglect to test for some proteins because we are not aware of the possible relation of these substances to the

everyday objects with which the individual associates. This fact has led the author to make a more or less detailed study of common household objects and their composition, and the results of this study are to be presented later.

The skin tests are made by placing the protein extracts on linear scratches in the epidermis and allowing them to dissolve with the aid of a drop of N/10 sodium hydroxide. Reactions, which occur usually in 10 to 30 minutes, are indicated by an elevation of the skin surrounded by an area of erythema and itching. Departures from the typical reactions are erythemas without wheal formation and delayed reactions occurring after several hours. A positive reaction is interpreted as a hypersensitiveness of the tissues of the skin to the protein in question. Whether or not that particular substance is the cause of the clinical manifestations must be investigated in each case by a careful inquiry into the history and by carrying out clinical tests, such as eating the offending food or inhaling the material if it falls in the inhalant group.

In addition to these routine tests the patient is tested for an extract prepared from his own house dust, or if that is not obtainable, from a mixture of stock dust extracts. This is done primarily with the idea that it is not always possible to determine all the substances with which the patient may come in contact, and that the house dust being a composite of all dust-producing substances in the home will be likely to contain the offending protein. This procedure has proved very useful both in diagnosis and in treatment.

In event that all the preceding tests are negative the case will probably fall into the group classed as bronchitic asthma. The use of bacterial protein extracts in the diagnosis of these cases has been entirely disappointing. However, it is extremely fruitful to make intracutaneous tests with bacterial vaccines, the bacteria to be tested having been previously determined by direct smears and cultures of sputum and other sources of infection. These bacterial suspensions are thick vaccines prepared in the accepted manner, each vaccine containing an individual species of organisms, and preferably autogenous.

*Treatment.* The active treatment of the asthmatic individual should always be preceded by the above mentioned steps. The systematic

carrying out of these procedures will lay the foundation for treatment in the vast majority of instances. It is necessary, however, in some cases to employ palliative remedies during the process of investigation and observation. The treatment of the patient should, therefore, be considered from three standpoints: palliative treatment while the diagnosis is in progress; treatment of the patient found to be hypersensitive; treatment of the non-sensitive cases or those not benefited by specific methods.

While the diagnosis is in progress palliative measures will often have to be resorted to in order to give the patient relief. Adrenalin hypodermically in doses suitable to the individual patient and given early in the attack is as a rule our most dependable agent. The hydrochloride or sulphate of ephedrin is being employed now with increasing frequency. This drug is usually given twice daily either orally in the form of tablets, capsules, or aqueous solutions, or hypodermically. If the individual's asthma is associated with a considerable degree of bronchitis, iodides in doses of 10 or 15 grains will be helpful. In obstinate cases the patient may burn powders or smoke cigarettes containing stramonium and lobelia leaves. Some sprays, especially those containing adrenalin, are helpful at times. Removal of definite foci of infection are always advised. The patient as a rule does better on a protein-spare diet.

If one or more positive skin tests have been obtained definite steps can be undertaken which will have a practical bearing on the treatment. An investigation is made of the individual's environment to determine the source of the offending substance as indicated by the positive reactions; this investigation may suggest further skin tests. At the same time clinical tests are made, as going into a stable to note the effect in a case that has given a positive skin test to horse dander. Whenever the object causing the patient's asthma is located it should be removed from the patient's environment. If this cannot be done the patient should be removed from the offending substance. In reality it is this latter factor that is so often responsible for the patient's improvement when he changes location or climate.

When avoidance of contact with the offending

substance is impossible or difficult we resort to the process of desensitization, or hyposensitization. This consists usually in subcutaneous injections of increasing amounts of the offending protein at intervals of two to five days. With the majority of proteins it is customary to begin with .1 c.c. of 1:10,000 and increase that by .1 c.c. or more each time until 1.0 c.c. is reached. Then the next stronger (1:1,000) concentration is used. However, the initial dose and rapidity of increase is best gauged according to the patient's individual reaction. In case of multiple positive skin reactions the patient is treated with the protein with which there is the most clean-cut clinical association or the one giving the strongest skin reaction.

In the event that all sensitization tests have been negative treatment will necessarily be non-specific. Vaccines, especially autogenous, should be tried first. In case of failure to benefit from these other non-specific protein therapy should be tried such as *B. typhosus* vaccine, *B. coli* vaccine, milk injections, or peptone. Tuberculin, as advocated by some, may be tried at this stage. Along with the above methods, or in case of failure of these, exposures to ultra-violet rays will often benefit the patient. Some cases that have not responded to any other method of treatment have done remarkably well with roentgen-ray therapy.

In some obstinate cases, especially those associated with considerable bronchitis, 30 grains of sodium iodide intravenously every two or three days has improved the patient. In case of failure of all of the above mentioned methods the unfortunate patient may still obtain considerable benefit from well-planned medication or change of climate.

It is rare indeed that the asthmatic going through in this systematic manner does not obtain a fair degree of relief from his symptoms.

#### SUMMARY

An outline is presented showing the systematic management of the asthmatic patient on the basis of our accumulated knowledge of the disease. The execution of this plan will minimize the percentage of failures in the treatment of asthma.



## TUBERCULOSIS IN MEXICANS\*

JACOB J. MENDELSON, M. D.

Physician in Charge, Stock Yards Dispensary; Municipal Tuberculosis Sanitarium; Attending Physician Cook County Hospital; Assistant Professor, Department of Medicine, Loyola University School of Medicine.

## CHICAGO

During the past few years clinicians have observed a progressive increase in the number of Mexican patients. Their economic status compels them, for the most part, to seek free dispensary or hospital service. Coincident with the notation of this type of patient, the observation has been made that pulmonary tuberculosis appears to be the most prominent cause of their disability. The situation with reference to this disease has become so evident that it was decided to correlate and study some of the available statistics relative to tuberculosis in this group.

A survey of patients admitted to the tuberculosis ward of the Cook County Hospital during the period from November, 1925, to November, 1926, with special reference to Mexicans, follows:

Total number of patients admitted.....	1,582
Number of Mexican patients admitted.....	48
Diagnosed:	
Pulmonary tuberculosis.....	46
Moderately advanced.....	7
Far advanced.....	39
Non-tuberculous.....	1
Doubtful.....	1

The total number of deaths in the Cook County Tuberculosis Hospital during the year was 733; the number of Mexicans who died of tuberculosis in that hospital during the year was 29.

A summary covering the points of interest in the classification relating to Mexican patients admitted follows:

Sex:	
Male.....	30
Female.....	18
Age incidence:	
7-14 years.....	2
15-24 years.....	25
25-34 years.....	12
35-63 years.....	9
Marital state:	
Single.....	23
Married.....	25
Occupation:	
School.....	2
Laborers.....	28
Housework.....	18
Length of residence in Cook County:	
Under one year.....	3

\*A study based on the admissions to the tuberculosis division of the Cook County Hospital, from November, 1925, to November, 1926. Read before Chicago Tuberculosis Society, March 10, 1927.

One year.....	6
Two years.....	11
Three Years.....	7
Over four years.....	12
Not ascertained.....	9
Length of stay in the hospital of patients who died:	
One day.....	3
One week or less.....	4
Two weeks or less.....	4
Four weeks or less.....	6
Eight weeks or less.....	6
Sixteen weeks or less.....	5
Five months.....	1
Disposal of the remaining nineteen cases:	
In hospital.....	7
Transferred to Oak Forest.....	2
Transferred to Surgical Department.....	1
Released.....	8
Left without permission.....	1

Several of the patients released were far advanced cases, in fact, a few were terminal cases who preferred to die at home. One of the patients, a child of seven with an acute ulcerative type of pulmonary tuberculosis, was taken home in a moribund condition. A boy of thirteen years with marked softening and cavitation throughout the left lung, improved remarkably with artificial pneumothorax treatment.

The statistics presented permit of analysis from various angles, some of which may be discussed in a somewhat detailed manner.

*Admissions to Cook County Tuberculosis Hospital.* Of Mexican patients, there were 48, or 3.03 per cent. of the total of 1,582 admissions. The Mexican Consul estimates the number of his people in Chicago as 7,000. They constitute, therefore, about one-fifth of one per cent. of the total population of this city, which is estimated to be 3,101,000. The ratio of admissions to the relative population was 64 per 10,000 in Mexicans as contrasted with about 5 per 10,000 in the general population, including negroes, who constitute over 20 per cent. of the admissions to the tuberculosis ward of the Cook County Hospital. The fact that most of the Mexicans admitted were far advanced cases, and that relatively few are inclined to accept hospital treatment as readily as does the general public, is an added indication of the size and importance of the tuberculosis problem in this group.

*The Death Rate.* During the year, 29 of the 48 cases, or about 60.5 per cent. of those admitted to the tuberculosis ward, died. The death rate in the general admissions exclusive of Mexicans, but including negroes, who comprise over 20 per cent. of the admissions during the year, was about 46 per cent. This indicates that the disease in Mexicans is either more virulent or that their

resistance is below the average. The death rate in Mexicans constituted almost 4 per cent. of the total death rate in the tuberculosis division of the hospital during the year, in contrast to the fact that they constitute only one-fifth of one per cent. of the city's population.

Considering the mortality rate from Cook County Tuberculosis Hospital alone, and totally disregarding the deaths from pulmonary tuberculosis in Mexicans outside of Cook County Tuberculosis Hospital, namely a total of 29 persons in a population of 7,000, gives us an average of 40.0 per 10,000 as against 6.65 in the general white population. This finding must receive its proper evaluation, in the analysis of a city's mortality statistics as an index of its efficiency in handling the tuberculosis problem.

*Age Incidence, Sex and Occupation.* Twenty-seven out of the 48 admitted were under 25 years of age. The mortality rate with reference to age was as follows:

17 years..... 1	22 years..... 1	26 years..... 2
18 years..... 3	23 years..... 2	30 years..... 2
19 years..... 2	24 years..... 5	31-63 years.... 9
20 years..... 1	25 years..... 1	

The oldest patient, age 63, died of chronic pulmonary tuberculosis after 33 days in the hospital.

The predomination of males is probably in proportion to the number of men in the total Mexican population. That women are less likely to go to a hospital, may also be a factor.

The men were all laborers; many were employed on railroad tracks and in the Chicago Stock Yards. The type of labor was unusually heavy. The women's activities were confined to housework, which in many instances presents a more difficult task than in the case of the average housewife, because in most of the homes every bit of available space is used for boarders, who have to be catered to.

*Length of Residence in the County and in the Hospital.* The period of residence in Cook County of all Mexican patients admitted ranged from one week to fifteen years. Of the patients who died, the length of residence varied from one week to four years, with two exceptions, namely, a patient 63 years of age, who resided here for seven years and one 24 years of age, whose record states that he was in the county thirteen years. It may be assumed that the nine patients whose length of residence could not be ascertained be-

cause of their inability to make themselves understood, were recent arrivals.

The period of residence in the hospital was comparatively short. Twenty-three out of a total twenty-nine patients who died were in the hospital two months or less. This also suggests a virulent type of infection apparently associated with a lowered state of immunity. A delay in admission must also be considered.

*Types of Cases.* The diagnosis on admission was far advanced pulmonary tuberculosis in 39 cases and moderately advanced in 7. One patient was diagnosed non-tuberculous and another with lung abscess and bronchiectasis with negative sputum was placed in the doubtful column.

The patients observed in all age groups presented a clinical picture of chronic ulcerative pulmonary tuberculosis, bordering on the acute type. In many instances it was difficult to form an opinion as to whether one was dealing with an acute pulmonary involvement bordering on or merging into the chronic or chronic pulmonary tuberculosis bordering on the acute type of the disease. The ulcerative element seemed to predominate. The usual findings on admission included fine, medium, or large moist rales in one or more, frequently in both upper lobes with signs of cavity formation associated with little or no exaggeration of the normal breath signs to indicate a tendency to fibrosis or induration.

A few cases were complicated by pleurisy with effusion which, however, seemed to have no favorable influence on the course of the disease. Suppurative tuberculous cervical adenitis was a complication in two cases. One case with tuberculous involvement of the sternum was observed. Fistula in ano was not observed.

There were no cases diagnosed miliary tuberculosis or tuberculous meningitis in this group.

*Etiologic Factors.* The clinical picture of pulmonary tuberculosis associated with a lowered state of immunity was evident. The histories denote recent development of activity, in fact, are suggestive of probable recent infection. Many of these patients have Indian blood, come from ranches and agrarian districts and apparently lack the immunity conferred by generations of contact with the tubercle bacillus, as well as the ability of adapting themselves to an urban environment of an unfavorable nature.

Although the possibility of recent infection exogenous in character rather than endogenous



may be considered, it is obvious that there are many factors that would require careful study and evaluation to form a scientific basis for such a view.

Thirty-six patients, according to their statements, were in the county three years or less. This is a relatively short period, in fact, short enough to require a consideration of the possibility of these people having been admitted to the United States with latent or active pulmonary tuberculosis. The fact that the disease was far advanced in the great majority of admissions, although this group is probably less inclined to accept early hospital care, would tend to support this view.

It would be of value were it possible to obtain statistics concerning the prevalence and mortality rate of tuberculosis in the districts in Mexico from which these people come. This, however, is probably impossible.

*Environmental Considerations.* The possibility of the environment and occupation being a factor in the development of the disease cannot be overlooked. In my contact with adverse environmental situations over a period of nine years of dispensary service, I can assert without reservation, that I have as yet to see other home conditions so unfavorable and so undesirable as those under which these people live. It is not unusual to find as many as twenty Mexicans in six rooms.

As a group, those observed are not robust; in fact, they appear to be of inferior physique and unsuited for the heavy labor they are compelled to perform. Their income is meager and their diet is affected accordingly, a combination ideal in preparing the soil for the propagation of the tubercle bacillus in a group who are, for reasons of language difficulties, inaccessible to health propaganda.

*Public Health Aspect.* The evaluation of the statistics presented makes it evident that we are dealing with a situation which in view of the fact that Mexican immigration is on the increase, must be reckoned with in anti-tuberculosis activities in the community. Whether it is due to their physical condition, their environment, or a combination of both, the amount of tuberculosis in this group is out of all proportion to the problem in the general population. The importance of this finding from a public health standpoint, and the need of adopting measures which will remedy the situation, is obvious. The problem

must be studied from a research, public health and social service standpoint. A survey of this portion of the population should be instituted to ascertain:

1. The exact incidence of pulmonary tuberculosis.
2. The basis for the increased incidence, and
3. The relation of the problem presented to community health.

A survey would also facilitate the early discovery of many cases, an important measure considering the crowded home conditions and the apparent lack of immunity in the contacts.

The cooperation of social and civic agencies in communities where these people live and especially of employers of this class of labor, is necessary in dealing with the problem.

#### CONCLUSIONS

The data presented based on observations in the Tuberculosis Division of Cook County Hospital permits of the following conclusions:

1. Tuberculosis is very prevalent in Mexicans in this city. The number of admissions to the relative population was almost fourteen times as great in Mexicans as in the general population.
2. Tuberculosis is more virulent in Mexicans, although they manifest a certain degree of immunity as is demonstrated by the finding that miliary tuberculosis was not observed.
3. The tuberculosis death rate is high, at least six times the average death rate in the general white population.
4. The tuberculosis situation in this group gives rise to a public health problem which promises to grow in importance with the increased trend of immigration.
5. Tuberculosis should be given first consideration in the diagnosis of patients of this type who present themselves for treatment.

1325 Independence Blvd.

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#### THE PSYCHOSES OF SHAKESPEAREAN CHARACTERS

C. L. WHITMIRE, M. D.

U. S. V. H. No. 62

AUGUSTA, GEORGIA

The study of psychiatry is such an abstract affair at its best and so relatively new when one considers the scientific management and care which are given to this unfortunate group of

individuals that for several years I have been curious to know how the people of a century or two ago felt about the insane. We have the histories of medicine which give us the scientific side of the question, but it was the laity's attitude that aroused my interest. The mind of the medical man has so changed over the passing years in its relation to insanity that it is no wonder that the mind of the average person shows an even greater divergence in this field. The customs and thoughts of any era of mankind are given permanence in its literature, so taking Shakespeare as a typical and observant recorder of the lives and manners of his time, I sought to find out how intimately he understood and recognized the insane. The literature was meagre—so meagre in fact as to be practically worthless for my use. The volume of Shakespeare's literary efforts being so comprehensive, it was not so much a question of which manuscripts to consult, as it was which of them might be properly excluded and still obtain the desired result. Consequently it was thought best to choose only the plays, for character building would be more intensified and more vividly shown in the dramatic presentations. The *dramatis personae* of thirty-four plays were studied; the various sonnets and shorter poems were not considered. The unusualness of the subject was a source of stimulation and flagellated my spirits when attempting to analyze the psychotic tendencies of each of the seven hundred-odd principal characters that Shakespeare has drawn in more or less detail in his dramatic works.

William Shakespeare was born in 1564 and wrote quite consistently up to the time of his death in 1616. The thoughts and deeds of all men are more or less influenced by the thought and action of the world at the time they are making their niggardly way across their allotted span. But this man seemed to be a little ahead of his sphere, giving to succeeding generations much more than his environment could possibly give to him, looking upon life and people with an acute and shrewd insight that was all the more remarkable because it covered such a wide diversity of subject. He was such a versatile writer, touching on all the comedy and tragedy that would appeal to the aristocrats as easily as to the more critical middle class. He had a superficial knowledge of more subjects than any

of his contemporaries. Can we not find out through his works what he knew about insanity? None can make any positive affirmation in regard to the habits of Shakespeare. Behind the mask of comedy or tragedy the man seems to baffle the shrewd and laugh at the wise. To try to snatch away or even to peep under it smacks of audacity.

It was during his period of writing that medicine was said to be in a state of malaise in so far as reaching improvements were concerned. Cesalpinus opined that blood and vital spirits passed from the arteries to the veins during sleep because at that time there was a swelling of the veins and a diminution of the pulse. About the date of Shakespeare's birth it was first found that there were valves in some of the veins, and Eustachius discovered the abducens nerve and the suprarenal glands. Felix Plater was urging the psychic treatment of the insane and Emperor Rudolph II of Germany, who was the archpatron of alchemy, was devoting much of his fortune and his entire time to his quest of potable gold, the philosopher's stone and the elixir of life. Just before the author's death, Harvey was teaching about the circulation of the blood, but that work was not published until 1628. The men of the seventeenth century were finally becoming weaned away from all that had been worshiped so blindly in the previous century—they were beginning to choose paths for themselves amongst the facts which experimental science had furnished them. Later in the year Newton propounded his laws of gravity and the value of cinchona was established. Sydenham was treating syphilis by administering mercury until two kilograms of saliva were discharged daily—certainly a bubbling over of enthusiasm. The fifteenth, sixteenth and seventeenth centuries meant a complete arrest of development for medicine. Of all the branches of medicine, obstetrics was at the lowest ebb during the life of Shakespeare. It is true that Vesalius, Fallopius and others had furnished us adequate studies of the female generative organs, but unfortunately the physiology and mechanism of labor were unknown. The result was that the mortality rate in normal labor was 50% and in complicated labor it was appalling. Two great advances were made in the early part of the sixteenth century—podalic version and the develop-



ment of the Caesarean section. Witches and devils figured prominently in the thoughts of men—indeed in the mind of no less a man than Luther. Bewitched individuals were frequently roasted and burned, so when we find later on that Shakespeare had these types in his plays there is no special reason for us to assume that they were of a delusional nature though oft-times the phrase “bewitched of the devil” really referred to a psychotic behavior. The tendency of his world was to give credence to all such happenings that we now look upon as belonging to the supernatural, the soothsayers having a **more** loyal following than many of our present day idols. Medical students were itinerants, traveling about from school to school, stealing money, food and whatever was not nailed down, roving about and leading the most dissolute lives. Even the professors themselves were more or less overpowered by the spirit of “wanderlust,” so that university faculties changed complexions frequently. Even practicing physicians led a nomadic life. Herb doctors, quackery and superstition were parts of the physicians’ armamentarium and through soothsaying and the intricate pseudo-science of amulets they were able to intrigue the unsuspecting populace. Ethical practice was not one of the early attributes of our noble profession. Uroscopy was a popular art and consisted in diagnosing diseases by gross visual inspection of the urinary output of the patient.

With attention held upon that background which bred the attitude of Shakespeare toward medical matters, we can better observe the shaping of his characters in the light of psychotic evidence as he presents and describes each one.

This paper will deal with only the psychotic elements of the various characters, no effort being made to analyze the personalities of those whose behavior is constitutional or neurotic. The adequacy of this stand will readily be appreciated when we realize that a character is brought upon the scene often with little or no preparation. In order to tell a Constitutional Psychopath, for example, we would have to know many points in his behavior life for years back and the reactions he would have undergone when certain situations were to be met. A play gives but the main high points of a character and covers at most but a few years of time. The treat-

ment and care of the feeble-minded is a neuropsychiatric problem and in Shakespearean days we find that many of the court fools, dwarfs and jesters, though supposedly feeble-minded, were thought to have moments of extreme wisdom. Indeed the misshapen creatures were looked upon as oracles and to consider the words that they would sometimes utter and the poetry that they would extemporize definitely cast them out of the feeble-minded group. For example, we should hardly consider one a low grade defect who speaks learnedly and accurately of the “*pia mater*” as does the dwarf in “*Troilus and Cressida*.” Nearly every play has amongst its personnel such a buffoon to relieve the terrible tragedy that surrounded the life of so many of the characters. It is purely for the comedy relief that is used by most playwrights for its dramatic effect that Shakespeare has given them form at all—he shows no great insight into the field of feeble-mindedness and only seems to have considered a person as feeble-minded who was a groveling or drooling idiot. He did not appreciate or distinguish the moron class, and the borderline and dull groups were not classified until centuries after his time. As we look at his characters we can see where many of the minor elements, such as the common soldiers, the rabble and the citizenry were of low intelligence, the maids, the gardeners, the prostitutes and those to whom he was pleased to give no more identity than to call them knaves, would in this day belong to the subnormal group of mentality.

In the “*Tempest*,” Prospero, the rightful Duke of Milan, casts a spell over the brother who is usurping his throne and also over the followers of his brother. This spell holds them in a melancholy grip wherein they are “brimful of sorrow and dismay.” The men are weeping and are retarded in thought and action. This has an acute onset and has something to do with their senses, for Prospero remarks later that he will break this charm over them and restore their senses. He refers to this spell as putting a plague on them. This disorder is something on the order of acute melancholy but of course differing a great deal from the melancholia that we recognize today, both as to etiology and course. When the proper mystic rites are invoked the grief and sadness pass away miraculously. There is no history as to whether or not any of the

subjects had ever experienced a similar attack previously to the unfortunate meeting with this brother, but we may assume that in those days such a procedure was rather common and anyone at any time was apt to have a depression thrust upon them for policy sake. Since the course depended upon the whim of the individual who had the power to enforce the dictum, the prognosis was not as hopeful as in the cases of melancholia with which we are familiar.

In the play "Troilus and Cressida," Cassandra, the daughter of King Priam of Troy, is pictured as a prophetess. Now many, if not all of those who pose as prophets, are neurotics or at least have a touch of the unreal in their make-up. But this young lady goes beyond that phase. She is spoken of by her brother as being his "mad sister." Her entrance on the stage is preceded by a shriek and when she appears her hair is dishevelled, her eyes are staring and fixed, her pupils are dilated, she seems to hear no one who is trying to quiet her and continuing in this hyperactive manner she runs across the stage, all the time giving advice as to how to win the present war against Greece. Her ravings are looked upon as divinations and her people crave to be guided by them. Her brothers call her mad and speak of her brain sick raptures. She can talk sensibly at times, as is shown when she beseeches her brother Hector to unarm for fear he will be harmed in the coming conflict. She obeys simple commands such as going to call her father, is distractable and is apparently oriented. She is said to be able to foresee the future and evidently has been able to guess fairly well in her past efforts, for the King, her father, uses her statements in his arguments to keep his son Hector at home. She dramatically describes the events which will transpire within the next few hours, gesticulating all the while, eyes fixed and entirely shut in from others. She is able to accurately predict her brother's death. This manner of acting extending over such a long period of time, evidently for many years, seems to be a manic reaction. We do not know whether or not she had had any depressed moments, whether she was ever retarded mentally and physically, so can presume she was a hypomanic. Her active interest in all that went on about her except for the brief periods when she struck an attitude and felt called upon to utter a few prophecies,

precludes the possibility of her being a praecox. She was not confined, but allowed to roam at will through the immense estate, so she was evidently harmless and well understood by her people. Her prophetic utterances were the audible reactions to her auditory hallucinations.

Much has been written about the character of Julius Caesar, and of all the characters in Shakespeare he is the one that is probably the best known to most people. But Caesar, for all his conquests, had his weaknesses—just as did Napoleon. Someone has declared that genius is akin to madness and that seems to be true, for wherever we find someone who has unusual ability we can, if we would look carefully enough, find some traits which are not so admirable. But poor Caesar had an organic affliction that was as detrimental to his future as his having envious friends. He was an epileptic with grand mal seizures. Often when in a crowd or during some excitement a seizure would come over him—he would fall down, froth at the mouth and would lose consciousness. Sometimes he would do things which he would afterward know were wrong, for when he regained consciousness he would ask if he had done anything amiss while in that state. He no doubt had performed in a manner quite unbecoming an emperor during some of these attacks in the past and this had made him acutely aware of his trouble. His people would excuse these acts, realizing and publicly discussing his infirmities. He would gasp for air, become cyanosed and would clutch at the neck of his doublet. But he hardly had the personality that we are accustomed to associate with an epileptic. He was not irritable, though he was quite egotistical. He did not have that persistent paranoid feeling—instead he would trust far more people than he should have and was so easily misled by these associates that he could not fathom their intentions. When he was offered the crown he gently refused it three times and each time he did so with more of an effort than the preceding time, for he really desired the prestige and authority with which it was invested. This repression of overwhelming desire was too much and brought on a grand mal seizure during the ceremonies. He showed but little deterioration though he apparently had several seizures every month. There is no evidence that he was psychotic along with



his epilepsy. In the same play before the murder of Caesar, one of the plotters, Casca, thought he witnessed many weird and unusual sights during the storm, which he interpreted as being omens of fate. Such as seeing a hand of a slave all afire though unharmed by the flames—a lion which passed him by without growling at him—women who declared they saw men in flames walk up and down the street, and other similar fantasies. Before this, Casca had apparently been a normal individual, but we can explain these hallucinatory experiences as the result of the stress under which he has been laboring the past week perfecting his part in the proposed murder of Caesar. He is hardly a psychotic and these ideas are more psychogenic hallucinations of a neurotic under acute stress. It was partly superstition in those days to account for the unusual by giving it a meaning of portending evil. Calphurnia, the wife of Caesar, the night before his death spoke of occurrences that to her were evil omens—a lion had given birth to a litter in the streets—the graves had opened and had given up their dead—fiery warriors had been seen fighting upon the clouds and their blood had fallen on the Capitol. Ghosts had squealed and shrieked about the streets. I believe these events are described merely to hold the attention of the audience and that Shakespeare had no idea of any deeper significance in their relation to the characters that uttered them. The dramatic value of such statements was fully appreciated by the author and he was too well aware of the value of suspense and tensility to allow a minor inconsistency of behavior to spoil his big moment.

The various ghosts and apparitions that appear in the play of "Cymbeline" are but the physical visualizations of the dreams of Posthumus, and like the former are used only for their dramatic value and have no psychotic significance. This method of helping the main action of the play was a favorite of Shakespeare and sometimes he overworked it as all of us are apt to do with our pet ideas. It was a forceful method in the early theatre but rather passé in the world today.

The word "mad" is often used to denote that which we term as insanity. In "Titus and Andronicus" the Roman general after whom the play is named is stricken with grief following

the rape and subsequent blinding of his daughter. He strikes at shadows which appear to him as having physical body—people call him a madman. It is probably the acute depression of a manic depressive psychosis, for there is no history that he was afflicted mentally before the sequence of events transpired which caused him to lose his reason. The ingratitude of his sovereign state was also a factor in this breakdown. He is attended day and night to see that he comes to no harm—does a great deal of talking which is not at all like a case of true depression—is hyperactive a few minutes after he is supposed to be so depressed and performs many queer and senseless acts, such as shooting arrows to the stars with letters attached. He is humored in these actions by his kinsmen who are trying to keep him quiet. This sudden change from one extreme to the other might be the author's attempt to portray a mixed manic, but the phases follow each other too closely. The intervals of a few minutes or at most a few hours is not consistent with the type that we classify today. But Shakespeare is often inconsistent. He seldom holds true to any one type and often envelops his characters with embodiments of the several types with which he happens to be familiar, with no special reason for so doing. The letters of Titus are addressed to Heaven, to Jove, to Mars, to Apollo and to Mercury, but we must weigh this point in the light of the understanding of the day when the people fully believed in such deities and daily looked to them for the redress of their real or fancied wrongs. Such in themselves are not to be considered as we do at this time when we see patients write letters to God. Titus is also allowed to show a marked paranoid nature by means of his libeling attitude against the Senate and blazoning its unjustness toward him to all who would give him ear. His age (he is a grandfather) would account for part of his trouble, not having the mental and physical stamina to withstand such shocks as he was forced to bear—with a suddenness that was terrific. There is one character throughout this play that has a personality that is difficult to analyze. That is Aaron the Moor. His chief aim in life seems to be in plotting death and torture to all the enemies of his master. He is either directly or indirectly responsible for the death of eight people and also for the ravish-

ment of the daughter before mentioned. For lack of anything more terrible to call him he would seem to belong to the constitutional psychopathic group having criminal instincts. His cardiac frigidity is infinite and he is apparently without any of the finer or noble emotions that constitute the average human being. His last speech is indicative of his entire attitude toward life, namely: "I am no baby, I, that with base prayers I should repent the evils I have done: ten thousand worse than ever yet I did perform, if I might have my will: If one good deed in all my life I did, I do repent it from my very soul." His very cunning makes him all the more dangerous and to gain his end he would stop at nothing. If we were given more of his past history there are many points that would dovetail into a paranoid condition.

The hero in "Pericles" has approached Diana's temple to learn the identity and present whereabouts of the wife he had believed buried at sea many years before, when there appears to him a vision of Diana. This vision appears while he sleeps and is in a physical form, so can not be called an hallucination.

King Lear is an old man, just how old we do not know, but he has been on his throne for many years and had been a well liked monarch. Lately his actions have been a little unusual—so much so that his daughters have noticed it and have taken it upon themselves to criticize his every deed. He is becoming irritable and fault-finding and they speak of him as being in his dotage. They turn against him and refuse to allow him to live with them—behaving much as the modern youths who feel that their elders are in the way when age has fastened upon them. The King has periods wherein he tears his hair and his people say that his wits have begun to unsettle. He officiates at a mock trial in all seriousness while the populace are amused. He is blind and friendless and talks of suicide. Later on toward the close of the play he appears fantastically garbed, dressed with garlands of flowers twined about his head and body. He speaks loud and long, berating the ingratitude of his family but never with any irrelevance. As one first becomes acquainted with Lear we feel that he has a senile type of psychosis, for the trouble was insidious and up to the point of breaking he had been able to govern his kingdom well.

The attacks of depression are usually associated with the manic group, but we know that seniles have fits of crying and weeping that are almost childlike. Would not the combination of depressing situations such as he has been confronted with, that of being blind and turned away from his kingdom by ungrateful daughters who refuse to allow him to spend his old age with them, be true etiological factors for his depressed moods and would not ideas of suicide be quite adequate on such an occasion? There is no slowing of thought or speech, nor even of action, so the depressive views are but minor episodes in the senile changes. When he comes out so weirdly and fantastically dressed, it makes one think of a praecox who has been bedecking and ornamenting himself, but the onset so late in life, together with the other points that we have, enable us to rule out that diagnosis.

Shakespeare must have had some acute worry or other mental strain during his impressive years, for so many of his characters have shown signs of a behavior change immediately after experiencing some great emotion. Even today such an etiological point is freely offered. Whenever one of his characters is beset with remorse or intensified feeling over an approaching action, it seemed to be quite the thing to visualize some horror connected with the act. A short time before Macbeth stabs Duncan, King of Scotland, he sees, a dagger in the air—he clutches at it, but being a hallucination of sight his hand comes back empty. He has a little insight into this discrepancy, for he asks himself if this false creation did not come from a heat-oppressed brain. One could not attach a psychosis to Macbeth on this point alone, but he also claims to have heard strange voices that made remarks about his contemplated murder of Duncan. His mistress does not hear the voices and tells him that he should not unbend his noble strength to think so brain-sickly of things. Coriat has called Lady Macbeth an hysteric. True she was the forceful nature in the Macbeth household and probably had it not been for her aggressiveness and purposeful antagonism towards Duncan, the murder would not have been committed. Macbeth was too weak willed—often was on the verge of giving up the whole bloody action, but was spurred on to its completion by the sarcasm and insinuations of cowardice directed to him



by his wife. But nowhere can I see where she can with logic be called a hysteric. She had a will that brooked no opposition and was given to wildly declaiming her plans for action. Her egotism was the basis for her irritableness and it was to further that ego that she made Macbeth her unwilling agent. Later after Macbeth has ordered the murder of Banquo by some professional thugs, he was able to see the ghost of Banquo. He was in a nervous state of mind for days preceding this event and when a company of courtiers sat down at the table, the ghost appeared at the place set for Banquo. Macbeth talked to it—prayed to it—but no one else at the table was able to see it and finally Lady Macbeth excused his actions by saying they dated from childhood. We would think perhaps that he might have been a *praecox* if this statement were true as to duration but we cannot take the statements of the Lady too seriously when we remember that she was equally guilty with Macbeth and only spoke thus to distract attention from him which might finally center on herself. At the gathering of the witches many apparitions are seen but these are present for dramatic effect and are brought about by the witches and not through any process of Macbeth's imagination. This problem of witchcraft is so intermingled with all of Shakespeare's plays that it is hard to state where psychosis begins and where the events are merely his delightful attempts to portray unusual sequences in terms which the people of the day believed.

Hamlet throughout the years has always been given the sobriquet of the "Melancholy Dane." Just how inaptly this really, in my opinion, applies to him we can see in a few minutes. Apparitions appear and disappear with good frequency in this play—sometimes one person sees one and sometimes two or three persons see the same one. In the latter case they surely cannot be called hallucinations and are stage effects only. Hamlet does become sad and broods a great deal over the death of his father, the King, and the subsequent marriage of his mother to the brother of his father, who has now ascended the throne that rightly belongs to Hamlet. His sweetheart was told to place a restriction on her outward affections for him and this did not serve to make him any the more jubilant. He would fast, then sit for long hours at a time saying and

doing nothing, a veritable depressed attitude I will grant. But he would quickly come out of that phase and would become noisy and talkative and would rave like a manic. These moods changed so suddenly and he would pass from one to the other and back again several times in the course of a day. He had ideas of mistaken identity and would call the King, his uncle, a fishmonger. But his talk was not always in this light. Sometimes his replies were pregnant with wisdom and in the same breath wherein he would not recognize certain individuals, he would talk sensibly to and would recognize other friends. He indulged in sharp repartee, but when the King would enter he would suspiciously lapse into the silly and irrelevant mode of speech. All this while sanely and smartly plotting a revenge that only a sane man could devise—showing much better judgment than a paranoid would show in the matter of detailed revenge. Surely such actions do not constitute a manic or depressed type of psychosis and whoever saw a manic change over into a depression and back again three or four times in the course of a day and always at some logical time when he knew his actions were being observed and for the known effect it would have upon the king? Too much purposeful reaction! What insight was there? He admitted that his mind was diseased, that is, he said it was, but did he really think so? Was not this either a superficial insight or an admission for the purpose for which he was planning? It is amusing to see where the King would agree with everything that Hamlet said, no matter how absurd it happened to be and Hamlet seemed to take an unholy delight in thus making sport of the King. Another point against his depression! The king's attitude when around Hamlet was that of an individual who did not want to offend at any cost, for he lived in terror of this supposedly insane man and was at that moment making plans for having him smuggled out of the country. On another occasion when the ghost appears, Hamlet is afraid of it—though recognizing it as the habit of his father. But no one else could see it and the queen tells him it is but the coinage of his brain. These hallucinations of sight and hearing are but momentary, for as soon as the ghost is out of the room there is a sudden breaking in Hamlet's pose and he converses with his mother and plans the events of

the current evening. Why has he been called the "Melancholy Dane" when he has shown no consistent signs of any type of psychosis? He had a depressed attack and likewise a manic attack, quickly changing from one to the other. But only on one occasion was he retarded in thought, action and speech. His manic periods were never over a very long period of time. Perhaps his description is due to the manner in which he discourses upon the stage, in a moody and thoughtful manner, giving dire accounts of happenings and uttering gloomy forebodings in a somber funereal voice. But these are not given in the vein of a true psychosis. Ophelia, the daughter of the Lord Chamberlain, is said to be distracted and by this we may presume that Shakespeare means insane. He often used the words "mad" and "distracted" in the sense of being insane, although that is not the true meaning according to Webster. This young lady sings, talks in the form of poetry, is irrelevant and most of her speeches are ribald. As with many others, her state of mind is supposed to be due to her father's death. She comes on the stage dressed fantastically with straws and flowers, the usual mode of depicting lunacy on the stage. Writers in times past and indeed many in the present day, could not depict any psychosis unless they had their characters shown as raving maniacs or groveling idiots. The young lady keeps up a meaningless jabber and finally drowns accidentally. Many of her actions are those of a praecox but, as we have seen before, there is always a mixture and never a pure array of symptoms which would feature any single type of psychosis. But the acuteness of the onset and the talkativeness with the fantastic array are quite suggestive that Ophelia was a hypomanic.

We should not expect Shakespeare to depict characters that represent the dementia praecox group as we are accustomed to classify them today, for it was only as recent as 1860 that Morel and later in 1891 that the term dementia praecox was used, and Kraepelin did not regard it as a distinct disease until 1896. This was two and a half centuries after Shakespeare died, so most insanities looked about alike to him. Many of his characters do show the silly and senseless behavior of the hebephrenic but these traits are so often mixed with those associated with the manic group. Nowhere is any mention made of

any mental trouble which can be laid to chronic over-indulgence in alcohol. Drug addiction was not recognized *per se*, although the author calls hyocyamus "the insane root that taketh the reason prisoner." When drugs were taken at all it was only for the playful recreation that allowed one to get rid of his enemies and one did not repeat the dose or obtain a tolerance for it, as care was taken that the original dose was of sufficient strength to fulfill its purpose. The toxicities and exhaustions which precipitate mental breakdowns are given no heed in any of his works, but the worries and trials attending the severance of family ties caused many of his characters to become abnormal. Syphilis was present in England in those days, but that it was able to cause any mental trouble was a point to be determined centuries later. The deliriums of fever were known and recognized as momentary episodes of unreality. None of the women showed the depressions with anxiety that characterize the menopause. Most were too easily relieved and were too acute. Shakespeare recognized the mental changes that occurred coincidentally with the physical decay of senility and gave a good description in "King Lear." As we have seen in Caesar—epilepsy was known, but there was no attendant psychosis in this case. Those cases of paranoia which we assume are so rare, are rare indeed. In his day if a man went about the city and talked much about the officials of the government, there would be but a few months allowed to the individual to develop a systematic arrangement of persecutory ideas. Shakespeare's understanding of the manias was only partial and likewise of the depressions. He gave symptoms that fitted either one and had them appear in the same persons at different times. That, in itself, was all right, but he had the transition from one phase to the other occur with such frequency and with such a short interval, sometimes several such changes in the course of a day, that we cannot assume that his knowledge of this group of psychotic phenomena was secure.

But should we expect too much of any man living as he did in the years when medicine was stagnant, when even the physiology of humans was imperfectly understood let alone having any special knowledge of mental functions? The names we give today to the various types of psychoses are but ones of convenience—they are



names for groups of symptoms occurring most often with some degree of certainty. But when a case presents itself that is not clear cut, does not readily fall into this prescribed group or into that one, we are all at odds. Such a case changes its presenting aspect from year to year and our real helplessness is so vividly shown by the many and widely divergent diagnoses which we attach to the case after several hospitalizations. If we, as men trained in this special work, are at odds so often, must we not give Shakespeare the credit of being a keen observer and diligent recorder of the abnormalities of mentality and overlook with condescension his many inconsistencies in a field which was foreign to him?

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#### FAMILY PHYSICIAN AS EDUCATOR

Dawson (*Lancet*) says: "If we are to guide people in the ways of health, if the community guards the health of its mothers, its babies, its school children, its industrial workers, the family doctor must become an educationist and in part a health administrator. If he does not, his role will suffer progressive diminution, curtailed as it will be on the one hand by the wholtime health official, and on the other hand by the invading specialist. This will, in my judgment, be a disadvantage to the community. The family doctor should remain the foundation of medical service, but his outlook, functions and training need modification to meet changing needs. First must come his care of the sick, but beyond that he will have communal and educational duties."

#### A DEDICATION

O God, who dwellest not in houses built by hands, but revealest Thyself in the lives of men and women who serve the world, hallow with Thy blessing this building reared for the fellowship of those who minister to the health of bodies and of minds. Let Thy blessing rest upon all who planned and all who labored to erect this edifice, and upon those who shall direct its use. Foster here both the science and art of physical well-being. May those who meet within these walls help each other to understand the causes and cure of disease, to be skilled in safeguarding and increasing public health, and to aid mankind to attain greater vigor for their work and play.

Grant that this Academy of Medicine rich with the memories of physicians and surgeons honored and loved in their generations, may uphold the standards and traditions of a high calling, and inspire its members with open-mindedness to truth, diligence in study, courage in the discharge of duty, reverence for those they serve, and unselfish devotion to their welfare.

In the midst of this wealthy city, enable these servants of humanity to remain untainted by sordid ideals, and by their life and work to assist in leavening the community with the spirit of the Son of man who came not to be ministered unto but to minister, and who set men free from ills of the flesh and spirit that they might share His own abundant life. Amen.—*Dedictory prayer (Rev. Dr. Henry Sloane Coffin), The New York Academy of Medicine.*

#### YOUR SOCIETY

The well-conducted medical society should represent a clearing house, in which every physician of the district would receive his intellectual rating, and in which he could find out his professional assets and liabilities. We doctors do not "take stock" often enough, and are very apt to carry on our shelves stale, out-of-date goods. The society helps to keep a man "up to the times," and enables him to refurnish his mental shop with the latest wares. Rightly used, it may be a touchstone to which he can bring his experiences to the test and save him from falling into the rut of a few sequences. It keeps his mind open and receptive, and counteracts that tendency to premature senility which is apt to overtake a man who lives in a routine."—Osler, "*Aequanimitas*."

#### SIRLOIN STEAK FOR ONE

The old gentleman tumbled over a five-barred gate just in time to save himself from the angry bull. "You brute," he spluttered, shaking his fist at the animal, "and I've been a vegetarian all my life."—*Cincinnati Enquirer.*

#### AND DON'T FORGET THOSE DUES

Golf is what letter-carrying, ditch-digging, and carpet-beating would be if those three tasks had to be performed on the same hot afternoon in short pants and colored socks by gouty-looking gentlemen who required a different implement for every mood.—*New York Sun.*

#### CUSTOM MADE

Neighbor—"Yes, but I 'ad the last word wiv him. I sez to 'im, I sez, 'You're as ugly as if you'd been measured for it.'"—Punch.

### Society Proceedings

#### ADAMS COUNTY

The annual business meeting of the society, December 12, 1927, was attended by thirty-four physicians.

The meeting was called to order at 8:20 P. M. with the President in the chair. Dr. O. F. Shulian read a very interesting report of the 1927 meeting of the American College of Surgeons, held at Detroit. Dr. H. Germann-Sinnock reported the 1927 meeting of the Inter-State Post Graduate Medical Association of North America, held at Kansas City. Dr. M. K. Germann reported the 1927 meeting of American College of Physical Therapy held at Chicago. Dr. Har-

old Swanberg briefly reported the 1927 meeting of the Radiological Society of North American held at New Orleans.

The minutes of the November meeting were approved as published in the *Bulletin*. The minutes of the December Council meeting were read and approved. Dr. Wells presented the proposition of the society conducting a newspaper publicity campaign. It was moved that the report be received and the recommendations of the committee concurred in (the recommendations of the committee to conduct the publicity campaign were for individual members to sign a contract with the Quincy newspaper, the expense being pro-rate according to the number of signatures secured). Dr. Knox made a substitute motion that the report of the committee be received and tabled and that the committee be thanked and discharged. After considerable discussion the substitute motion was carried.

Dr. Stevenson reported for the Entertainment Committee who had charge of the social arrangements for the All-Day meeting in November. His report showed that after all expenses of the banquet had been paid there was a balance of \$7.50 left. A motion was carried that the report be received and placed on file and the balance of \$7.50 be placed in the general funds of the society.

The matter of parking privileges for physicians was brought up by Dr. A. H. Bitter and a motion was carried that the President appoint a committee of two to interview the Mayor concerning this. Drs. J. N. Jackson, R. L. Sutton, and W. W. Duke of Kansas City were elected Honorary Members of the Adams County Medical Society. Applications for membership in the society by Drs. J. M. West of Quincy and R. E. Graber of Clayton were read and ordered turned over to the Board of Censors. The Board of Censors reported favorably on the applications of Dr. E. B. Miller and Dr. T. W. Rhodes who were elected to membership in the society.

The President of the society read a report of the accomplishments of the organization during the past year. The Secretary then read his annual report. The report of the Treasurer was then read. Dr. J. A. Koch made a motion that inasmuch as Dr. L. H. A. Nickerson had been a member of this society for 50 consecutive years that his dues for the coming year and henceforth be remitted for him and that he be permitted to enjoy all of the privileges of the society. Second and unanimously carried.

The annual election was then held and resulted as follows: Dr. W. H. Baker, president; Dr. J. F. Ross, first vice-president; Dr. H. Germann-Sinnoek, second vice-president; Dr. Harold Swanberg, secretary. A motion was then carried that Dr. Swanberg be permitted to name his own assistant as assistant secretary of the society. Dr. J. A. Koch was elected treasurer. Drs. Center, Irwin and Ericson were declared members of the Council to serve for two years; Dr. Ralph McReynolds, as Medico-Legal Member; Dr. J. W. E. Bitter, as member of the

Board of Censors; Dr. Howard S. Maupin, as member of the Library Committee.

At this time a committee of two was appointed to escort the newly elected President, Dr. W. H. Baker, to the chair. Dr. Baker assumed office and expressed his great appreciation for the honor that had been conferred upon him and pledged 100 per cent attendance and his best endeavors to make 1928 a very successful year in the history of the organization.

Dr. J. A. Koch made a motion that the dues for 1928 be fixed at \$20.00 per member. Dr. Wells made a substitute motion that the dues remain at \$15.00 per member. Considerable discussion followed. When a vote was called for, the substitute motion was lost and the original motion of Dr. Koch to make the dues \$20.00 was carried. Dr. Swanberg made a motion that the Secretary be authorized to enter into a new contract for the publication of the *Bulletin* during 1928 at an expense not to exceed \$100.00 and that a voucher be drawn on the treasurer for this amount. Carried. Dr. T. B. Knox made a motion that the honorarium for the secretary be increased to \$100.00. It was duly seconded. Dr. Swanberg made a motion that this be tabled but it failed to secure a second. Dr. Knox's motion was then carried. Dr. Swanberg made a motion that the January meeting be a social one and be placed in charge of the newly appointed Entertainment Committee. Dr. Koch made a substitute motion that the January meeting be for members of the society only. A vote on the substitute motion was lost and the original motion carried. The President called for an expression as to the length of the society programs and the expression showed that a program of about two hours' time would prove most desirable.

The meeting adjourned at 11:30 P. M.

HAROLD SWANBERG, M. D.,  
Secretary.

## CHAMPAIGN COUNTY

At the annual meeting of the Champaign County Medical Society held at the Champaign Country Club, the following officers were elected: president, C. George Appelle; vice-president, H. L. Ford; secretary-treasurer, G. D. Gernon; board of censors, C. F. Newcomb, E. D. Wise and W. E. Schowengerdt; medical defense committee, J. C. Dallenbach; delegate, C. F. Newcomb; alternate, L. O. Sale; ethical relations committee, W. L. Gray, T. G. Knappenberger and James H. Finch.

In addition to the election of officers a 6:30 dinner was served and the Society was entertained by an illustrated discourse on "Differential Diagnosis of Abdominal Conditions," delivered by Dr. H. L. Kretschmer.

G. D. GERNON, M. D.,  
Secretary.



**COOK COUNTY****CHICAGO MEDICAL SOCIETY***Regular Meeting, December 7, 1927*

Medical and Dental Arts Building, Fifth Floor  
8:30 P. M.

Telephone Central 3026

The Diagnosis and Management of Toxic Goiter.

.....Frank H. Lahey, Boston, Mass.

Discussion: E. P. Sloan, Bloomington, Ill., Charles L. Mix, Carl A. Hedbloom, Karl A. Meyer.

*Joint Meeting Chicago Medical Society and the  
Douglas Park Branch, December 14, 1927*

1. Observations on the Prevention and Early Treatment of Cardio-Vascular Disease. Maurice Lewison Discussion....Walter W. Hamburger, I. M. Trace
2. Diseases of the Gall Bladder and Biliary Tracts in the Light of Recent Studies..Victor L. Schragar Discussion: Andrew Ivy, Professor Physiology, Northwestern University Medical School.

**GREENE COUNTY**

Regular annual meeting of the Greene County Medical Society was held in White Hall on Friday, Dec. 9, 1927.

The business session was called to order by the president, Dr. A. K. Baldwin, at Walton Hospital at 11:30 A. M.

After the reading of the minutes of previous meeting a number of business matters were disposed of and the society proceeded to the election of officers, which election resulted as follows: president, Dr. N. J. Bucklin of Roodhouse; vice-president, Dr. A. R. Jarman of White Hall; secretary-treasurer, Dr. W. H. Garrison of White Hall; censor, Dr. W. C. Tunison of White Hall.

The Society then adjourned to the dining room where a splendid chicken dinner was served and a pleasant social hour was enjoyed. The scientific session was convened at 1:30 P. M. when the following subjects were discussed, viz., Eclampsia, Post Partum Hemorrhage, Hemorrhage of the Stomach and Bowel, Hemorrhoids and Fistula in Ano. Every physician present participated in the discussion.

A number of instructive cases were reported and many interesting experiences were related.

A vote of thanks was tendered Miss Walton for entertaining us so royally in her well equipped little hospital.

Miss Walton has spared neither pains nor money to bring her hospital up to the minute, especially for obstetric work, and she richly deserves the patronage of the people and the support of the physicians of Greene County.

Ten members and several visitors were present.

W. H. GARRISON,  
Secretary.

**Marriages**

HENRY F. HOOKER, Danville, Ill., to Miss Hazel I. Hull of Rantoul, at Evanston, October 22.

**Personals**

Dr. Albert N. Mueller has been elected president of the board of health of Rock Island.

Dr. Peter Kronfeld, Vienna, Austria, has been appointed assistant professor of ophthalmology at the University of Chicago.

Dr. Edgar C. Turner, Chicago, has been appointed health officer of the city of Savanna to succeed the late Dr. James D. Lyness.

Dr. George W. Crile, Cleveland, was the guest of honor at a cancer prevention meeting for the public sponsored by the Oak Park Physicians' Club, Oak Park, at the West Suburban Hospital and Oak Park High School Auditorium, December 8.

Dr. Edward G. Ahrens has resigned as medical director of the Decatur and Macon County Tuberculosis Sanatorium, Decatur, to accept the superintendency of the Oakland County Sanatorium, Pontiac, Mich.

Dr. Norval H. Pierce, professor and head of the department of laryngology, rhinology and otology, University of Illinois College of Medicine, addressed the Rock Island County Medical Society, December 13.

Dr. John M. Dodson, executive secretary of the Bureau of Health and Public Instruction of the American Medical Association, addressed the Omaha-Douglas County Medical Society, Omaha, recently, on "Importance of Medical and Health Education of the Public."

Dr. Thomas Hugh Scott has been appointed medical officer-in-charge of the Veterans' Bureau hospital at Maywood, succeeding Dr. Robert W. C. Francis, who recently resigned. Dr. Scott comes from a similar position in a Veterans' Bureau hospital at Muskogee, Okla.

William T. Bovie, Ph.D., professor of biophysics, Northwestern University Medical School, addressed the Chicago Laryngological and Otological Society, December 5, on the therapeutic effect of ultraviolet lights.

Dr. Herman N. Bundesen, health commissioner of Chicago from December 1, 1927, has accepted appointment as health editor of the *Chi-*

*Chicago Daily News* and director of health of the Sanitary District of Chicago.

### News Notes

—Additions are under construction to the Blessing Hospital and St. Mary's Hospital, Quincy, the total cost of which will be about \$600,000; they are expected to be completed by September, 1928.

—The Chicago Orthopedic Club and the Chicago Tuberculosis Society met jointly, December 15. Dr. John Ridlon discussed "Diagnosis of Tuberculosis of Bones and Joints," and Dr. Edwin W. Ryerson, "Operative Treatment of Tuberculosis of Bones and Joints."

—The Will-Grundy County Medical Society was addressed, November 30, by Dr. Victor L. Schrager, Chicago, on "Diseases of the Gallbladder and Biliary Tract," and by Dr. Robert W. Keeton, associate professor of medicine, University of Illinois College of Medicine, Chicago, December 7, on "Control of Obesity."

—A dinner will be given, January 13, by the north side branch of the Chicago Medical Society and the Physicians' Fellowship Club in honor of Dr. Lucius H. P. Zeuch, editor of the first volume of the History of Medical Practice in Illinois; Glenn Frank, LL.D., president of the University of Wisconsin, will be the speaker.

—The Chicago Consumptive Aid Society opened a home at Geneva, Ill., a few days ago, which was bought for \$77,000. It was formerly the property of Hamilton J. Brown of Batavia and includes an estate of fifty-three acres. This accomplishment represents twelve years' work by this society of women to provide a place for the care of persons with incipient tuberculosis.

—Physicians of Champaign and surrounding counties were invited to a reception and banquet at the formal opening of the Eastern Illinois Memorial Sanatorium at Urbana, December 6. Among others, Dr. Charles A. Elliott, professor of medicine, Northwestern University Medical School, and Vice President of the American Medical Association, gave an address on progress in medicine.

—The Lee County Medical Society, Dixon, was host to the North Central Illinois Medical Asso-

ciation, December 2. Among others, Dr. Paul B. Magnuson, Chicago, spoke on disabilities of the hip joint; Dr. William A. McNichols, Dixon, indications and treatment of lung abscess by the bronchoscope, and Drs. John R. Vonachen and Clifford U. Collins, Peoria, congenital stenosis of the pylorus.

—The Chicago Society of Internal Medicine met at the City Club, December 19. Drs. Joseph L. Miller discussed "Diseases of Ancient Man," M. Friedman and N. Cordero, "Influence of Posture on Renal Function Tests," and Herbert F. Binswanger, Harry Segal and Solomon Strouse, "Effect of Emotion on Basal Metabolic Rate."—The Chicago Medical Society held a joint meeting with the Douglas Park Branch, December 14. The speakers were Drs. Maurice Lewison and Victor L. Schrager.

—The Chicago Gynecological Society held its four hundred and thirtieth regular meeting at the John B. Murphy Memorial, 50 East Erie Street, December 16. Drs. Irving F. Stein and M. Leventhal read a paper on "Laparotrachelotomy: An Analytic Report of Forty Consecutive Operations Without a Death;" Drs. William C. Danforth and Robert M. Grier, "Five Years' Experience with Low Cervical Cesarean Section," and Drs. Sydney S. Schochet and Carey Culbertson, "An Experimental Study of Endometriosis."

—At the annual meeting of the Chicago Gynecological Society, Dr. Joseph L. Baer was elected president; Drs. William M. Thompson and David A. Horner, vice presidents, and Dr. Sydney S. Schochet, secretary; Drs. Emilius C. Dudley, Henry T. Byford and Edmund J. Doering were elected honorary presidents. Dr. Carey Culbertson gave an address on "Review of the Early Years of the Chicago Gynecological Society," and Gordon J. Laing, Ph.D., of the University of Chicago, spoke on "Trials of the College Professor."

—The fourth Ludvig Hektoen Lecture of the Billings Foundation of the Institute of Medicine of Chicago will be given by Dr. Francis Peyton Rous of the Rockefeller Institute for Medical Research, January 27, at the City Club, on "The Genesis of Gallstones." The fourth Lewis Linn McArthur Lecture of the Billings Foundation will be given February 24, by Dr. Frank



C. Mann of the Mayo Clinic, Rochester, Minn., on "Experimental Peptic Ulcer." The Chicago Surgical Society will be the guest of the institute at this meeting. Dr. Franklin C. McLean, professor of medicine, University of Chicago, was elected a member of the board of governors at the annual meeting, December 6. At a meeting of the board, December 14, Dr. John Gordon Wilson was elected president of the institute; Dr. Edwin R. LeCount, vice president; Dr. George H. Coleman, secretary; Dr. John Favill, treasurer, and Dr. Ludvig Hektoen, chairman of the board.

—At the December 16 meeting of the Physicians' Fellowship Club of Chicago the newly elected members, Drs. Amberson, Glat, Harned, Kipnis and Windmueller, discussed the question: "What Does Being a Doctor Mean to me?" December 23, Dr. J. G. Berkowitz discussed "The Public Health Institute."

—The *Bulletin* of the Chicago Medical Society, December 24, featured an article by Dr. Arnold H. Kegel, Commissioner of Health, on Diphtheria in Chicago. The statistics quoted indicate an increase in the fatality of this disease in recent years and more deaths in eleven months this year than any year since 1922. Ample dosage of antitoxin, "at least 20,000 units" on the first visit, is recommended. Physicians are urged to immunize preschool children with toxin-antitoxin as diphtheria is most fatal at that age.

—Dr. W. H. C. Smith, superintendent of Beverly Farms, a home and school for nervous and backward children at Godfrey, Ill., has just completed extensive additions which enable it to accept 20 more children. Improvements include new laundry, new and central heating plant, new cottage, new bathrooms and toilets.

—On Tuesday, November 29, there was a section conference of the Illinois Medical Laboratory Association held at the Decatur & Macon County Hospital, Decatur, Ill. Demonstrations of laboratory technic were made on the following subjects:

Kahn test	Hydrogen-ion titration
Tularemia	Bacterio-phage
Undulant fever	Fungi.

After the demonstrations the following program was given: The Relation of the Clinical

Laboratory to Public Health, by J. J. McShane, M. D., Epidemiologist, State Department of Public Health; Vincent's organisms and Vincent's Angina, by Thomas G. Hull, Ph.D., Chief, Division of Laboratories, State Department of Public Health; Indications for Blood Chemistry, by C. R. Smith, M.D., Pathologist, Decatur and Macon County Hospital.

## Deaths

HENRY T. BOERLIN, Chicago; Harvey Medical College, Chicago, 1900; aged 64; died, November 10, of cerebral hemorrhage and chronic interstitial nephritis.

MICHAEL J. FAY, Chicago; Bennett Medical College, Chicago, 1894; Kentucky School of Medicine, Louisville, 1895; member of the Illinois State Medical Society; aged 66; died, November 26, of pleurisy and myocarditis.

JOHN PATRICK KANE, Chicago; Chicago College of Medicine and Surgery, 1913; a Fellow, A. M. A.; for twelve years on the staff of the Cook County Hospital; aged 44; died, December 9, of lobar pneumonia.

WILLIAM KIRBY McLAUGHLIN, Jacksonville, Ill.; Chicago Medical College, 1890; aged 65; died, November 24, in a local hospital, of chronic interstitial nephritis.

WALTER HOWARD MEENTS, Chicago; Rush Medical College, Chicago, 1907; member of the Illinois State Medical Society; aged 44; died, November 30, of ruptured aneurysm of the aorta.

HARRY DELPHOS ORR, Chicago; Northwestern University Medical School, Chicago, 1904; a Fellow, A. M. A.; member of the American Urological Association; surgeon general of the Illinois National Guard; served during the World War; aged 50; died, December 8, at the Army and Navy General Hospital, Hot Springs National Park, of multiple myelomas and anemia.

ARISTOPH SPARE, Chicago; Medico-Chirurgical College of Philadelphia, 1898; member of the Illinois State Medical Society; clinical associate in ophthalmology, Rush Medical College; aged 55; died, November 21, of coronary thrombosis and angina pectoris.

WILLIAM CARVER WILLIAMS, La Grange, Ill.; Western Reserve University School of Medicine, Cleveland, 1892; aged 60; died, November 29, of pulmonary tuberculosis.

GEORGE SHERMAN WILSON, Nokomis, Ill.; Medical College of Indiana, Indianapolis, 1893; aged 62; died, November 24, at the Huber Memorial Hospital, Pana, of heart disease.

HORACE LYMAN WILSON, London Mills, Ill.; Rush Medical College, Chicago, 1885; member of the Illinois State Medical Society; aged 66; died, November 12.

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# Illinois Medical Journal

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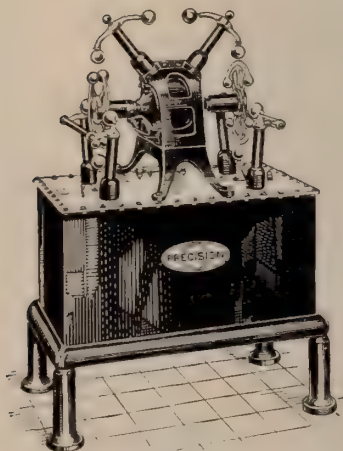
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# ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

VOL. LIII

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No. 2

## ILLINOIS MEDICAL JOURNAL

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State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles, advertising copy, cuts and all communications relating to advertising to Dr. Charles J. Whalen, c/o Illinois Medical Journal, 185 N. Wabash Ave., Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

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## Editorial

### NEXT ANNUAL MEETING OF THE ILLINOIS STATE MEDICAL SOCIETY

May 8 to 11, 1928

NEW STEVENS HOTEL, CHICAGO

The seventy-eighth annual meeting of the Illinois State Medical Society will be held in Chicago, May 8 to 11, 1928, in the new Stevens Hotel, which is the largest hotel in the world. On account of the character of the conference this year, it is thought advisable to extend the time to four days instead of three days.

As a combination clinical and scientific session, clinics will be held at the new medical units of the University of Chicago, of Northwestern University, and of the University of Illinois, and at the Cook County Hospital. All scientific and general programs will be at the Stevens Hotel.

Exhibits will be at the hotel, including many scientific displays and demonstrations, as attractive features.

Invitations have been sent to the physicians of states adjoining Illinois, such as Michigan, Wisconsin, Iowa, Missouri and Indiana, all adjacent to Illinois, and this insurances a record-breaking attendance. General hospital clinics will be arranged for both Monday, May 7, and Saturday, May 12, and during the session for a full week of clinics.

Officers of the five sections are anxious to get in touch immediately with members from both the Chicago Medical Society and the downstate societies who desire to read papers at the meeting.

Elsewhere in this issue is a preliminary outline of the program of some of the sections.

It will be noticed that the programs this year will be conducted somewhat differently from those of former years.

The seventy-eighth meeting should be the ban-



ner convention in the history of the State Society.

### PAPERS FOR THE 1928 ANNUAL MEETING, ILLINOIS STATE MEDICAL SOCIETY

Owing to the fact that the 1928 meeting will be held in Chicago, May 8 to May 11, with a clinical program being arranged, it has been decided that the majority of the scientific papers presented in the various Sections should be presented by down-state members. At this time, only a few members have asked to be placed on the programs.

Because of the fact that the meeting this year comes earlier than usual, it will be necessary to have programs completed by the last of March. An appeal is made at this time to the down-state men to get in touch with the officers of the Sections if they desire to present papers.

Plans are being made which will undoubtedly make the 1928 session the greatest in the history of the Society. Commercial exhibits will be better and far more numerous than at any previous meeting.

Scientific exhibits are being arranged by the Chairman of the Committee on Scientific Exhibits, Dr. J. P. Simonds, 303 East Chicago Avenue, Chicago. The large medical schools will be represented, as will also be many other organizations and institutions.

It is hoped that all men desiring to present papers at the meeting, in any of the Sections, will get in touch with officers of the Sections at once.

The Section officers are as follows:

#### *Section on Medicine*

J. L. Sherrick, Chairman, Monmouth, Illinois.

N. S. Davis, III, Secretary, 952 North Michigan Blvd., Chicago.

#### *Section on Surgery*

J. R. Harger, Chairman, 25 East Washington St., Chicago.

Earl D. Wise, Secretary, Champaign, Illinois.

#### *Section on Eye, Ear, Nose and Throat*

C. F. Yerger, Chairman, 4458 West Madison St., Chicago.

Walter Stevenson, Secretary, Quincy, Illinois.

#### *Section on Public Health and Hygiene*

A. A. Crooks, Chairman, Peoria, Illinois.

E. W. Mosley, Secretary, 3325 Lincoln Ave., Chicago.

#### *Section on Radiology*

Harold Swanberg, Chairman, Quincy, Illinois.

E. G. C. Williams, Secretary, Danville, Illinois.

It is hoped that many members of the Society will get in touch with the above officers of the Sections, and arrange to present papers at the best meeting ever held by any state medical society.

HAROLD M. CAMP, M. D.,

Secretary, Illinois State Medical Society.

### MAKE HOTEL RESERVATIONS EARLY

The seventy-eighth annual meeting of the Illinois State Medical Society will be held at the Stevens Hotel, Chicago, May 8 to 11, 1928.

In anticipation of the largest and best meeting in the history of the Society, the committee on arrangements has inaugurated extensive preparations for the meeting and entertainment of visiting physicians and their families.

The committee on hotel accommodations urges that reservations for the meeting shall be made early.

The Stevens Hotel, Society Headquarters, Michigan Boulevard, between Seventh and Eighth Streets, Chicago, will house the scientific as well as the exhibition features of the meeting.

Reservations should be made directly with the Hotel Stevens.

Below is an outline of the cost of rooms and of meals at the Stevens.

#### THE STEVENS ROOM RATES

Number of Rooms	Single Rate	Double Rate
263	\$ 3.50	\$ 5.00
1242	4.00	6.00
943	5.00	7.50
278	6.00	9.00
181	7.00	10.00
93	10.00	15.00

Fixed-price meals:

#### JAPANESE LUNCH ROOM

Breakfast, 45c; luncheon, 65c; dinner, \$1.00.

#### COLCHESTER GRILL AND OAK ROOM

Breakfast, 60c and 75c; luncheon, 85c; dinner, \$1.50; Sunday dinner, \$2.00.

#### MAIN DINING ROOM

Luncheon, \$1.25; dinner, \$3.00 per person.

A la carte service is available in all restaurants at all meals.

#### A FEW FACTS ABOUT THE STEVENS HOTEL

The Stevens Hotel, which will be convention headquarters of the Illinois State Medical Society, May 8 to 11, 1928, is the world's largest and greatest hotel, occupying the entire block on Michigan Boulevard between Seventh and Eighth Streets. The hotel overlooks Grant Park and Lake Michigan.

An investment of \$27,000,000 in ground, structures and surroundings is represented. There are 3,000 rooms each with bath, circulating ice water, closet, outside light and air.

The Stevens rises twenty-five stories above the ground with a four-story tower above and five basement levels below. Four entire floors are given over to public use and service. These contain dining rooms, restaurants, lobbies, lounge rooms, ball rooms and shops.

The Stevens is recognized as having the largest and most beautiful ball room in the world, equipped with motion picture screen and every facility for dinners, meetings, dances and spectacles, including a theatrical dimmer board by which every conceivable chromatic lighting effect can be produced.

There are seven ball rooms in The Stevens Hotel and nine private dining rooms with seating capacity from twenty-five to one hundred in each. One hundred rooms on the fourth floor can be used for committee meetings or displays and range in seating capacity from twenty-five to one hundred fifty persons.

The power plant of The Stevens is the largest privately owned utility of its kind in the world and is equipped with generators capable of producing 3,200 electrical horsepower—sufficient for the industrial and domestic needs of a community of 60,000 people.

The Stevens has the world's largest check room with accommodations for 3,200 guests in addition to restaurant and various floor check rooms which furnish accommodations for several thousand more.

The house surgeon has a completely equipped two-ward hospital and operating room.

The Stevens has its own ice cream factory, its own laundries, its own candy factory, printing establishment and power plant. And also, it has a circulating library of 25,000 volumes.

The site alone cost \$6,000,000.

The carpets cost \$600,000.

Sixty carloads of mattresses are used in the hotel and four carloads of glassware.

The silverware filled three freight cars. The hollow-ware alone weighed 43,576 pounds.

A 101-foot reservoir stores water for bathing and drinking purposes.

From the roof garden promenade the cliffs and dunes of Michigan can be seen.

The lounge, carpeted with the three largest Saruk rugs in all the world, is furnished at a cost of more than \$200,000.

The grand ball room can seat 4,000 guests.

An army of 2,500 employees is necessary to keep up the service.



Stevens Hotel, Headquarters for the 1928 Annual Meeting of State Society



Fourteen passenger elevators carry an aggregate of 224 guests at a time.

The telephone switchboard system is capable of receiving and transmitting calls sufficient for a city of 15,000.

The refrigerating plant has a capacity of 300 tons of ice daily.

The ice cream factory can produce 120 gallons of ice cream an hour, while the candy factory can satisfy the appetites of 15,000 small boys.

During the first month of its operation a banquet was served to 4,700 people at one seating in record time.

The laundry, operated on a weekly schedule, could care for the wants of a community of 60,000 people.

#### COMMITTEE ON ARRANGEMENTS FOR 1928 ANNUAL MEETING

The Illinois State Medical Society should have in the annual meeting, at Chicago, May 8 to 11, 1928, the best meeting and the largest attendance that any State Medical Society has ever had. Plans have been under way for several months. In order that they may be carried out to the best advantage, each member of the Society should cooperate with the committee on arrangements, and the officers of the Society. The committee on arrangements is here given:

Nathan S. Davis, III, 952 North Michigan Blvd., Chicago. General Chairman.

G. Henry Mundt, 25 East Washington Street, Chicago. Ex-officio member.

A. G. Bosler, 720 West 61st Street, Chicago. Ex-officio member.

R. R. Ferguson, 4175 Irving Park Blvd., Chicago. Chairman of Publicity Committee.

J. S. Nagel, 25 East Washington Street, Chicago. Ex-officio member.

S. J. McNeill, 4802 North Robey Street, Chicago. Ex-officio member.

Frank R. Morton, 910 South Michigan Ave., Chicago. Chairman, Committee on Meeting Places.

Irving S. Cutter, 303 East Chicago Ave., Chicago. Chairman, Committee on Clinical Section Meetings.

P. H. Kreuscher, 30 North Michigan Ave., Chicago. Chairman, Committee on Pre and Post Session Clinics.

William S. Bougher, 6706 South Green St., Chicago. Chairman, Committee on Information and Hotels.

I. A. Abt, 104 South Michigan Ave., Chicago. Chairman, Committee on President's Dinner.

Harry M. Hedge, 30 North Michigan Ave., Chicago. Chairman, Entertainment Committee.

H. G. Wells, 1233 East 56th Street, Chicago. Chairman, Committee on Scientific Exhibits.

Emmet Keating, 2758 Fullerton Ave., Chicago. Chairman, Committee on Registration.

W. A. Pusey, 7 West Madison Street, Chicago. Treasurer, Committee on Arrangements.

W. H. Holmes, 30 North Michigan Ave., Chicago. Secretary, Committee on Arrangements.

F. O. Frederickson, 4700 Sheridan Road, Chicago. Chairman, Committee on Commercial Exhibits.

Members of the Society having suggestions of interest, are requested to report these to the respective chairmen, or to the General Chairman. Such suggestions will be carefully considered, towards an effective handling of the program.

#### TENTATIVE SCHEDULE SECTION ON MEDICINE, ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

At the meeting of the Illinois State Medical Society, May 8 to 11, 1928, there are to be two scientific programs of the Section on Medicine, one Tuesday afternoon, May 8, and one Friday morning, May 11, which are to be held at the Stevens Hotel. There are to be five clinical meetings of the Section: Wednesday morning at Northwestern University Medical School, Wednesday afternoon at the University of Chicago Medical School on the Midway, Thursday morning at the Cook County Hospital, Thursday afternoon at the University of Illinois Research and Educational Hospital, and Friday afternoon at the Loyola University Medical School Clinic at Mercy Hospital. The programs of the clinical section meetings are to be presented by the university faculties and hospital staff members. It is the desire of your secretary to have the scientific programs presented by members of the Society who do not belong to the Chicago Medical Society, excepting those given by the Section's guests who are to be Dr. Fred M. Smith of Iowa City and Dr. Charles P. Emerson of Indianapolis. There will be eight or ten papers presented before the Section in addition to these two and each paper will be limited to 20 minutes. To date, your secretary has received but two requests to present papers

from men not members of the Chicago Medical Society and eight or ten from members of the Chicago Medical Society.

Will members of the Section kindly communicate at once with the secretary, N. S. Davis III, 953 N. Michigan Ave., Chicago, if they wish to present papers? Papers on neurology and psychiatry, pediatrics, dermatology and the medical aspects of pregnancy and the puerperium are especially requested, as there are no separate sections for those subjects, in addition to papers on internal medicine.

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#### PROGRAM OF THE SECTION ON EYE, EAR, NOSE AND THROAT, ANNUAL MEETING OF THE STATE MEDICAL SOCIETY

Monday, May 7, 1928—Morning and afternoon, hospital clinics; evening, Eye, Ear, Nose and Throat Section banquet.

Tuesday, May 8, 1928—Morning and afternoon, hospital clinics; evening, general open meeting.

Wednesday, May 9, 1928—Morning and afternoon, scientific program; evening, president's banquet oration on surgery; stag.

Thursday, May 10, 1928—Morning, University of Chicago; 5 P. M., oration on medicine; evening, college and class reunions.

Friday, May 11, 1928—Morning and afternoon, Northwestern University.

Saturday, May 12, 1928—Morning and afternoon, University of Illinois.

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#### PRELIMINARY PROGRAM

##### SURGICAL SECTION, ILLINOIS STATE MEDICAL SOCIETY, May 8 to 11, 1928

Chicago members will be limited to clinical demonstrations as provided for below:

Downstate members will have the privilege of furnishing all the didactic papers except the two invited guests.

Members will be afforded an opportunity of inspecting the great medical institutions on the days when each furnishes the clinical demonstrations.

Tuesday, May 8: Afternoon: Reading of papers at hotel.

Wednesday, May 9: Morning: Reading of papers at hotel.

Afternoon: Northwestern University clinical demonstrations by members of the faculty.

Thursday, May 10: Morning: University of Illinois clinical demonstrations by members of faculty.

Afternoon: Cook County Hospital Clinical demonstrations by members of staff.

Friday, May 11: Morning: University of Chicago clinic demonstrations by faculty.

Afternoon: Loyola University at Mercy Hospital by members of staff.

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#### OUR CONTRIBUTION TO THE ECONOMIC SIDE OF MEDICINE

Because the scientific side of the medical profession is capably cared for by the contributors to the *ILLINOIS MEDICAL JOURNAL*, it would appear to be one of the paramount duties of the editor to devote a large amount of space to calling attention to the importance of the economic side.

Medicine is the most unselfish of the scientific professions.

As a consequence few doctors pay any attention to economic questions until they find themselves landed high and dry.

The very nature of the task of being a good physician deprives a man of the faculty for even keeping half an eye open to guard against selfish impositions that are the daily bread of the profession. Day after day doctors are called upon to perform miracles and doctors do so. Perhaps it is not unnatural that a large percentage of the population should come to feel that if a man possesses this superhuman skill that he is possessed also of some magical way of dealing with the common problems of mortality. The idea seems to be to wish upon a doctor all the handicaps imaginable and then to tell him to get results in the face of handicapping legislation, unpaid bills to him but ever promptly presented other bills to pay; the overpaid nurse, lay dictation, free clinics for persons able to pay and the like. Some day some philanthropists will hit upon the scheme of *endowing the doctor instead of endowing schemes and plans for robbing the doctor of the substantials from which he must*



*draw the foundation upon which to erect his temple of service to the community.* Nor are we alone in our ideas on this point. Let quotation at length in this respect be made from an esteemed contemporary to the effect that

"By some of our readers it may be thought that we are harping too much on the economic phase of the practice of medicine. We fully recognize that the medical profession as a whole is shamefully imposed upon. A good percentage of the members of the profession in their struggle for a living income are in contact with obstacles of their own creation. The high cost of living affects the medical man as it affects everyone else, but he does not seem to recognize the necessity of meeting these conditions by changes in business methods or practices which have existed for half a century. With a view to stimulating the individual physician to mend his ways and look upon his work as a means for securing a decent living and a competence for his old age, as well as being of humanitarian service, and to encourage the medical profession as a whole to create a better economic position for itself, we keep harping on the subject.

"A well known and busy public accountant is authority for the statement that many people apparently in moderate circumstances have substantial savings accounts and whenever sick, use the incident as a basis of delay in the payment of obligations and for seeking either a marked discount of the bill for medical services or donation of the entire account.

"Some people secure such service and pride themselves on their ability to secure concessions. Many doctors who are waiting upon a patron for the payment of a long standing account or who perhaps have settled with that patron for considerably less than fifty cents on the dollar, have been surprised to see that same patron blossoming out with a new and expensive touring car and note that the members of the family always wear the latest style in clothes.

"Medical men as a class never will be Shylocks in exacting the pound of flesh, but as a class they owe it to themselves to show a little backbone in adopting business-like methods in securing just compensation for their services and as prompt payment as is secured by the merchant or anyone engaged in any other line of work."

## CHICAGO MEDICAL SOCIETY AND ILLINOIS STATE MEDICAL SOCIETY GIVE UNAPPROACHABLE ECONOMIC SERVICE TO PHYSICIANS

Distinct and unapproachable economic and legislative service is given the thousands of physicians in Illinois by the Illinois State Medical Society, and the Chicago Medical Society, as well as other component parts of the state and county societies, to such an extent that the well-versed man wonders what in the world the so-called "service promises" can be of the "Chicago Physicians Economic League" that is endeavoring to organize the doctors through the racketeer route, claiming that no economic service is offered by the legitimate organizations.

In the face of such falsity of attack it is well to epitomize briefly some of the unconscious benefits that have accrued to the profession from the various specific committees of the Chicago Medical Society and the Illinois State Medical Society and that have, so to speak, continued "to toil upward in the night."

Apart from those immeasurable legislative benefits, the protection of which, the rank and file in many instances seems to take for granted, the ethical and legitimate and mutual organizations provide even more excellent facilities than does the new organization for that one feature on which the appeal of the Chicago Physicians Economic League seems to pivot,—that is, the promised collection of all the slow or bad debts on the ledgers of any physician who will join their league.

Since this collection idea seems to be the alluring tidbit and the great desideratum for joining the Chicago Physicians Economic League, it may be as well at the outset to dispose of claims made in this direction by stating a few truths.

Propagandists for the Chicago Physicians Economic League assert that this league is going to collect all of any doctor's bad bills, and otherwise generally as a citizen and business man permit him to ride high and handsome as well as to progress faster in his profession, since these sordid details are removed from his mind. In return for such business benevolence the Chicago Physicians Economic League asks merely an initiation fee of \$5.00 per capita, that will be supplemented later on by a graded scale of

fees for all collections made, *and made by their own methods and at a minimum fee of twenty-five per cent.*

Public records show the business manager of the league to have been involved so deeply in certain matters as to inspire a doubtful confidence in his discretion, and the stability of his enterprise, especially when viewed from the ethical standpoint of the medical profession.

No doctor can afford to lose his bad accounts. To combat this evil already the Chicago Medical Society has adequate arrangement. Over a year ago contract was made with a nationally known ethical concern, bonded by one of the famous surety companies—the Fidelity and Casualty Company of New York—actually to perform efficiently the service promised by the Chicago Physicians Economic League, and to do so under absolutely ethical conditions and at a minimum expense to the physician. A contingent fee only is charged for the collection feature. Safeguard of the physician's rights arising from any possible impositions made by the collection agency is contained in the aforementioned contract to the extent of a bonding amount of \$5,000. Further, this contract provides that in event of any controversy a board of arbiters shall be appointed, the entire personnel of which shall be appointed by the Chicago Medical Society in accordance with the provisions of the contract with the collection agency, and further, the findings of this board of arbiters shall be accepted as the final decision by the collection agency. Further, that under no circumstances will any appeal to outside authority or to the courts be made by the collection agency.

And further, **THE PHYSICIAN GETS THIS GILT-EDGED SERVICE WITHOUT THE EXPENSE OF ANY INITIATION FEE.**

As a result of foresight and hard work, the organized profession of the state prevented the enactment of the notorious Sheppard-Towner Bill, six years ago, in so far as the State of Illinois is concerned. At its recurrence for consideration four years ago, this bill was again repelled as it never reached a vote. Again two years ago, so influential had the organized profession become that its sponsors held that "discretion was the better part of valor" and after due deliberation, did not re-introduce their bill.

There were only five states with sufficient

foresight to turn down this nefarious legislation. Illinois can take pride in being one of the five. The five states are Connecticut, Illinois, Kansas, Maine and Massachusetts. Again three years ago, in the Illinois General Assembly, nearly fifty bills of a detrimental medical nature were introduced. Not one was written on the Statute books. Again one year ago, in the Illinois General Assembly, fifty-one bills of a detrimental medical nature were introduced. Not one was written on the Statute books.

No other state in the Union can show such a record. It stands for *pre-eminent organization service to membership.*

For twenty years the organized profession of the state has kept watch and ward over the interests of the profession. If equivalent service had been rendered in Washington we would not now be suffering national legislative handicaps. From the perfection of the Medical Practice Act in 1923 to the present day, continuous service has been given the physicians of the state of Illinois by their organizations. During the past twenty years the fight has included the overthrow of some almost incredibly favorable laws for quacks and charlatans. No other state has been so successful in such prevention of vicious medical legislation. Illinois comes nearer than any other state in the Union, of possessing one standard for entrance into the practice of medicine. Illinois is not afflicted with especial boards, conditions and the like, by which the inept traffic in human life, nor are its ethical doctors humiliated by having to sit on the same boards with quacks, and representatives of vicious cults.

Referring again to the Medical Practice Act in Illinois, it is one of the most capable pieces of legislation of that nature that is in existence. Furthermore the Supreme Court has upheld its validity, not once but *on four separate occasions.* This piece of legislation owes its place on the Statute books to the organized medical profession of Illinois. It is a masterpiece and it is the work of organized medicine in the state.

Advisability of a blanket act administered by one board including all branches of human treatment, is self-evident in view of the multiplicity of laws and examining boards in many states. When the proposed measure was pending, endless effort was made by drugless healers to liberalize the act. Through the untiring ef-



forts of officers of the various medical societies of the state, the bill passed in essentially the same form as that in which it was offered.

Many members of the General Assembly are in the real estate business. According to law these must pay a renewal license fee annually. This group sought attachment of a \$5.00 renewal fee on the Medical Practice Act. Vigorous opposition by organized medicine, hours of conference with the leaders in that session of the General Assembly enabled doctors to defeat the amendment, and save a great deal of money and needless red tape for the physicians. With about twelve thousand medical men in Illinois, defeat of this amendment approximates a saving of \$60,000 annually to these physicians, or practically \$300,000 since the passage of the act in 1923.

In 1923 the Sheppard-Towner Bill was championed by a large lobby of women of education who waged an intensive campaign for the adoption of the provisions of the Federal Act by the State of Illinois. During the hearing on that bill in Congress in 1921 Illinois was the only state that sent a physician to Washington to oppose the passage of the Federal Maternity law. Despite the able protest of Dr. Charles E. Humiston, then president of the Illinois State Medical Society who represented us, unfortunately the bill was passed. Every state in the union accepted the act except five; viz., Illinois, Maine, Massachusetts, Kansas and Connecticut. The protest made by Illinois at that time later bore results against federal subsidies of this sort. The Illinois State Medical Society has aided in defeating several hundred pernicious bills in the last four Illinois General Assemblies. Out of the twelve hundred bills introduced at the 1927 session, one hundred twenty-six, or over ten per cent, had either a direct or an indirect bearing on the medical men of our state. In 1925, after a bill curtailing public health departments in the necessary performance of their work had been literally "kissed" through the House and Senate and the governor urged to sign the measure by the League of Medical Freedom call went out to representatives of the Illinois State Medical Society. After a conference with, and upon the advice of this committee, the governor vetoed the bill.

Diversion of the tremendous post-bellum lay interest in the practice of medicine with an in-

sistence for participation therein that has verged dangerously towards state medicine and the practice of the profession by lay-persons, has been a problem of organized medicine, with the life saving idea of turning such interest from a force pernicious to the public welfare into an active auxiliary of the recognized medical profession. The medium for dealing with this vital problem has been sought for and found in the educational committee of organized medicine. Through this committee, organized lay-bodies, especially of women, either club women, or those who had felt the urge of concerted benevolence as vested in war auxiliary work are being shown that the best contribution they can make for public health and infant welfare is to work through organized medicine rather than through organized laymen. This problem, including as it does the tremendous amount of free service given through the endowed clinics of private foundations, touches upon the similar debauching of the province of ethical medicine through the federalization of sixty per cent of the hospitals of the country. Government ownership of so large a percentage of hospitalization facilities of the country is of a piece with the noose that has been slipped over the heads of the taxpayers and the profession by such legislation as the Sheppard-Towner bill, and all of which has been and is being fought by organized medicine. Especial study, careful appraisal and gradual solution, of all these problems and their ramifications reveal a seemingly insurmountable task for the medical profession of the nation. Combating these terrific problems with their tremendous financial backing, has been a vital labor, and continues to occupy the time and keenest mental concentration of the officers of ethical medical organizations of the State of Illinois. An enormous amount of time and an inestimable amount of personal and financial sacrifice on the part of these officers has gone into the solution of these problems, as far as they have been solved and into the protection of the rights of ethical physicians, and even further for those of the people of the state themselves. A final word may not be malapropos about what in future may prove to be the weakest link in the chain and one to which the education committee has bent much attention. The place played by organizations of women in the furtherance of state medicine is serious. Many of the women

who said that they thought the Sheppard-Towner law was a beneficial thing simply did not know what they were talking about, so it was discovered, as their emotions only had been appealed to, and investigation showed that the average club woman who spoke blithely about the excellencies of the Sheppard-Towner bill thought that it means financial maternity care for the poor.

The education committee sponsored by the Illinois State Medical Society has paid especial attention to the education of club women and other associations of women along the lines of what organized medicine is doing. As a result, today there is a far better understanding between these bodies and the organized profession and a spirit of cooperation on the part of these lay-bodies to the end that the problems of organized medicine is to receive and adopt their assistance, but not to suffer their dictation.

Where formerly organized medicine met with misunderstanding opposition, now organized medicine is receiving support and a large amount of cooperation from the Illinois Federation of Women's Club, the Parent-Teacher Association, and numerous similar and affiliated organizations. All of this has been accomplished through untiring endeavor from the diligent, conscientious, far-seeing, self-sacrificing executives who have served as officers for many years of the state society and its components.

#### REPORT OF PROGRESS OF OFFICERS AND COMMITTEES OF THE ILLINOIS STATE MEDICAL SOCIETY FOR THE YEAR 1927 AND FOR

##### OTHER PERIODS

JAMES H. HUTTON

Chairman, Scientific Service Committee of the Illinois  
State Medical Society

The following appointments have been filled by the Scientific Service Committee since January 1, 1927:

February 9—Union County Medical Society, L. Schultz, Chicago.

April 7—Knox County Medical Society, Maurice L. Blatt, Chicago.

April 14—Union County Medical Society James T. Gregory, Chicago.

April 22—Marion County Medical Society, Cecil M. Jack, Decatur.

April 26—LaSalle County Medical Society,

R. W. Keeton, Chicago, "The Management of Diabetes."

April 28—Iroquois County Medical Society, Don Deal, Springfield, "The Acute Abdomen"; Discussion, S. E. Munston, Springfield.

May 6—McHenry County Medical Society, J. C. Krafft, Chicago, "Child Health."

May 10—Rock Island County Medical Society, R. W. Keeton, Chicago, "Feeding the Sick in Acute Infections."

May 12—Union County Medical Society, Lindon Seed, Chicago, "Diagnosis and Treatment of Goiter."

May 12—Moultrie County Medical Society, Henry B. Thomas, Chicago, "Arthritis; Its Diagnosis and Treatment."

May 12—Kankakee County Medical Society, Philip Kreuscher, Chicago, "Orthopedics from the Viewpoint of the General Practitioner."

May 19—Jo Daviess County Medical Society, F. L. Heinemeyer, Rockford, "Occiput Posterior" and discussion, "Tachycardias and Hypotensions in Pregnancy."

May 27—Marion County Medical Society, E. P. Sloan, Bloomington, "Goiter; Its Diagnosis and Treatment."

June 14—Rock Island County Medical Society, Maurice L. Blatt, Chicago, "Infant Feeding."

June 17—DeWitt County Medical Society, Channing W. Barrett, Chicago, "Diagnosis and Treatment of Extra-Uterine Pregnancy."

June 24—Marion County Medical Society, Frank C. Murrah, Herrin, "The Acute Abdomen."

July 1—Madison County Medical Society, R. W. Keeton, Chicago, "Feeding the Sick in Acute Infections."

August 26—Marion County Medical Society, G. M. Cline, Bloomington, "Principles and Technic of Infant Feeding."

September 8—Kankakee County Medical Society, George B. Lake, North Chicago, "The Psychic Factors in Disease."

September 13—Rock Island County Medical Society, John B. Claridge, Chicago, "Circulatory Disturbances of the Extremities, with Special Reference to Thrombo-Anginitis Obliterans; Etiology, Pathology, Treatment."

September 22—Iroquois County Medical Society, "Prenatal Care; Toxemias, Etc."

October 2—Vermilion County Medical Society, L. D. Snorf, Chicago, "Peptic Ulcer."



October 11—Clay County Medical Society, A. F. Lash, Chicago, "Use of Vaccines and Serums in Puerperal Infections."

October 11—Rock Island County Medical Society, Francis E. Seneary, Chicago, "Treatment of Syphilis."

October 11—Eighth Councilor District, Illinois State Medical Society, William Harcourt Browne, Chicago, "Management of Last Half of Pregnancy."

October 12—Fifth Councilor District, Illinois State Medical Society, E. P. Sloan, Bloomington; R. R. Ferguson, Chicago; W. R. Marshall, Clinton.

October 27—Seventh Councilor District, Illinois State Medical Society and Macon County Medical Society. Champaign County Medical Society furnished program. Symposium on "Non-pregnant Bleeding Uterus," C. L. Gernon, G. Henry Mundt, Earl D. Wise, J. C. Dallenbach.

October 27—Tri-County Medical Society (Warren, Knox, Henry), J. L. Baer, Chicago, "Toxemias of Pregnancy"; James T. Gregory, Chicago, "Appendicitis and the Acute Abdomen."

November 8—Rock Island County Medical Society, Jacob Meyer, Chicago, "Nephritis."

November 10—Union County Medical Society, Don Deal, Springfield, "The Acute Abdomen; Differential Diagnosis and Treatment" E. A. Rives, E. St. Louis, "Management of Breech Presentation and Hemorrhage."

November 10—Bureau County Medical Society, F. L. Heinemeyer, Rockford, "Toxemias of Pregnancy."

November 17—Whiteside County Medical Society, Aaron Arkin, Chicago, "Differential Diagnosis of Pulmonary Lesions"; J. L. Sherrick, Monmouth, "Cardiac Arrhythmias" Don C. Sutton, Chicago.

December 1—Tenth Councilor District, Illinois State Medical Society, James H. Hutton, Chicago, "The Interpretation of Symptoms"; G. Henry Mundt, Chicago, "Concerning Some of the Fundamentals of Otolaryngology"; Harold M. Camp, Monmouth, "Acute Osteomyelitis."

December 13—Rock Island County Medical Society, Norval Pierce, Chicago, "Indications for Surgical Intervention in Acute Mastoiditis."

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January 10—Rock Island County Medical Society, Harry E. Mock, Chicago, "General Principles of Treatment of Joints Following Trauma"; J. P. Simonds, Chicago, "General Principles of the Pathology of the Bone"; W. R. Cubbins, Chicago, "Fractures Around the Knee Joint."

January 10—McLean County Medical Society, James H. Hutton, Chicago, "Pregnancy and the Endocrines."

January 12—Warren County Medical Society, H. E. Irish, Chicago, "The Prevention and Treatment of Heart Disease"; Aaron Arkin, Chicago, "Differential Diagnosis of Pulmonary Lesions"; Charles P. McKenna, Chicago, "Renal Tuberculosis."

January 17—Christian County Medical Society, Lowell D. Snorf, Chicago, "The Treatment of Gastric and Duodenal Ulcers."

January 20—DeWitt County Medical Society, Walter Bain, Springfield, "X-Ray and Laboratory Diagnosis."

February 9—Kankakee County Medical Society.

#### G. HENRY MUNDT

President of the Illinois State Medical Society

The following out-of-Chicago engagements have been filled by the President of the Illinois State Medical Society since June 3, 1927:

June 9—Lake County (Indiana) Medical Society, "Nose and Throat Infections from the Standpoint of the General Practitioner."

June 30—Franklin County Medical Society, "The Relation of the Physician to the Medical Society."

July 14—Mason County Medical Society, "The Relation of the Physician to the Medical Society; Address to public, "The Battle."

July 21—Peoria County Medical Society, "Your State Medical Society."

July 26—Macoupin County Medical Society, "Nose and Throat Infections from the Standpoint of the General Practitioner."

September 8—Oak Park Lions Club, "Health as a Business Asset."

October 11—Eighth Councilor District, Illinois State Medical Society, "The Relation of the Physician to the Medical Society."

October 12—Fifth Councilor District, Illinois State Medical Society, presided at meeting; Address to public, "The Relation of Organized Medicine to Public Health."

October 13—Semi-Centennial Celebration of the Establishment of the Illinois State Department of Public Health, presided at opening session.

October 24—Illinois Tuberculosis and Public Health Association, "Your State Medical Society."

October 27—Seventh Councilor District, Illinois State Medical Society, "The Medical Profession and Public Health"; Address at Chapel of James Millikin University, "The Royal Road to Health."

November 3—Southern Illinois Medical Association, "Concerning Some of the Fundamentals of Otolaryngology"; "Your State Medical Society."

November 16—Tazewell County Medical Society, "Your State Medical Society."

November 22—Christian County Medical Society, "Your State Medical Society."

December 1—Tenth Councilor District, Illinois State Medical Society, "Concerning Some of the Fundamentals of Otolaryngology"; "Your State Medical Society."

December 14—Testimonial Dinner given to Dr. W. F. Grinstead, Cairo, address.

#### JEAN MCARTHUR

Secretary, Educational Committee of the Illinois State Medical Society

The Educational Secretary has attended the following out-of-Chicago meetings since July, 1927:

July 26—Macoupin County Medical Society.

August 5—Madison County Medical Society.

August 16—Woodford County Medical Society.

September 13—Clay County Medical Society. McLean County Woman's Auxiliary.

October 12—Fifth Councilor District, Illinois State Medical Society.

October 13—Semi-Centennial Celebration of the Establishment of the Illinois State Department of Public Health.

October 24—Illinois Tuberculosis and Public Health Association.

October 27—Seventh Councilor District, Illinois State Medical Society.

November 22—Christian County Medical Society.

December 1—Tenth Councilor District, Illinois State Medical Society.

December 14—Testimonial Dinner given to Dr. W. F. Grinstead, Cairo.

January 6—Madison County Medical Society and Woman's Auxiliary.

January 12—Warren County Medical Society.

Physicians have been scheduled by the Educational Committee to fill the following appointments during January, 1928:

January 3—Sullivan, Public Health Meeting.

January 3—Yorkville, Woman's Club.

January 3—Chicago, Lawson School.

January 5—Chicago, Chrysanthemum Art and Charity Club.

January 6—Chicago, Morgan Park High School.

January 7—Alton, Young Men's Christian Association.

January 9—Martinsville, High School.

January 9—Waukegan, Mary B. Talbert Club.

January 9—Compton, Woman's Club.

January 9—Cerro Gordo, Parent-Teacher Association.

January 10—Marengo, Parent-Teacher Association.

January 10—LaFayette, Woman's Club.

January 10—Collinsville, Study Club.

January 10—Chicago, Rogers Park Woman's Club.

January 12—Chicago, Carter H. Harrison High School.

January 12—Auburn, Woman's Club.

January 14—Alton, Young Men's Christian Association.

January 18—Chicago, Bateman School Parent-Teacher Association.

January 18—Coldwater, Woman's Club.

January 18—Galva, Community Meeting.

January 19—Chicago, Hyde Park Woman's Club.

January 24—Chicago, Rogers Park Lions Club.

January 24—Kewanee, Rotary Club.

January 25—Chicago, Annual Clinical Meeting of the Chicago Dental Society, two speakers.

January 26—Chicago, Roseland Lions Club.



TESTIMONIAL DINNER TO DR. GRINSTEAD. HONORS FOR FORMER PRESIDENT OF ILLINOIS STATE MEDICAL SOCIETY. DR. WILLIAM F. GRINSTEAD COMPLETES HALF CENTURY OF SERVICE

A man's golden jubilee of service to his fellowmen is a living monument of inspiration to the younger generations.

Browning has said that of all praise the most appreciated is that of one's fellow craftsmen. If this be true Dr. Grinstead faces the New Year a most happy man. For certainly a meed of praise was his at the banquet justifiably arranged in his honor December 14, 1927 by the Southern Illinois Medical Society. The affair was held in the Halliday hotel at Cairo. Dr. Andy Hall of Mount Vernon, Ills., was toastmaster. Among the speakers were Dr. G. Henry Mundt of Chicago, president of the Illinois State Medical Society; Dr. Roland Hill, St. Louis, Mo.; Judge Albert Watson of Mount Vernon, former justice of the Illinois Supreme Court, Dr. J. L. Wiggins of East St. Louis, Ills.; Dr. B. S. Hutcheson, Dr. Grinstead, and former Congressman Ralph Bailey of Sikeston, Mo.

Practically the entire membership of the Alexander County Medical Society attended. Presentation was made to Dr. Grinstead of a silver loving cup bearing the inscription "Presented to Dr. William F. Grinstead by the Physicians of Southern Illinois at a Testimonial Dinner on December 14, 1927, in Appreciation of Fifty Years of Honorable Service in the Practice of Medicine."

There were seventy-five guests in attendance. Dr. James M. McManus sang Dr. Grinstead's favorite song, "Where the River Shannon Flows." A vellum bound copy of the guest list was also given to the guest of honor, while the guests received a souvenir menu card bearing a photograph of Dr. Grinstead and some of his favorite quotations.

The toastmaster, Dr. Andy Hall told how Dr. Grinstead had been left a half orphan at eight years of age with a widowed mother and three younger brothers, had taught school, earned his way, helped others and risen to the height of being an eminent physician, a beloved citizen, a Fellow of the A. M. A., a Fellow of the American College of Surgeons, and an extensive

traveler. He added that in addition to being a member of the Illinois State Medical Society of which he has served as president in 1920: that Dr. Grinstead belongs also to the Alexander County Medical Society, the Southern Illinois Medical Society, the Southeast Missouri Medical Society and for the last forty years has attended the meetings of the A. M. A. all over the country. Further remarked Dr. Hall: "I can assure you, Dr. Grinstead, that enshrined in the hearts of the physicians of Southern Illinois and your many other friends throughout the State, are pleasant memories of you that will never die. We congratulate you on the things that you have accomplished in your community, the efforts that you have put forth to raise the standard of the medical profession, and the good that you have done for humanity. We congratulate you for the high honors that you have received from the various medical societies."

In presenting the loving cup to Dr. Grinstead, Dr. Hall remarked:

"Dr. Grinstead: For more than one hour we have listened to the testimony of men who have known you during your boyhood days, have known you when you began the study of medicine, have known you as a country doctor, and men who have been associated with and have known you from the time you moved to Cairo down to the present time.

"They have testified that you have been an honored and useful citizen of this city, of the state, and of the nation. They have testified that you have been generous and kind to the poor, that you have been a man of high ideals, and that your word was as good as your bond. They have testified that as a physician you have been industrious, honest, conscientious, a hard student, and that you have acquired a professional skill and success that but few men have attained. They have testified that you have put forth your best efforts to elevate the standard of the medical profession by attending the medical meetings of your county, district, state, and national associations, and that you have been given the greatest honor that a man could attain in his county, district, and state societies.

"Personally, I have known you for thirty-seven years. The first time that I ever met you was at a medical meeting. And the last time previous to this evening was at a medical meet-

ing. I have never attended a district, state or national meeting that I did not expect to find you there. And I was never disappointed save once, and on that occasion you were confined to bed in a hospital where you had undergone a serious surgical operation. Unlike many physicians who attend medical meetings, you always evinced a deep interest in the scientific programs, sat up under the dripping of the sanctuary, listened attentively to the papers, and took an active interest and part in the discussions. If there was anything worth while you complimented the essayist and encouraged him in his work.

"After listening to all that the various speakers have said concerning you, I am fully convinced that they have given us a true record and a true picture of you. As a further evidence of the high esteem in which you are held by the medical profession throughout Southern Illinois and adjoining states, and in their behalf I take great pleasure in presenting you this loving cup as a token of our friendship, love and best wishes.

"It is not the weight of the jewel plate  
Nor the rustle of silk and fur,  
But it is the spirit in which the gift is great  
As the gifts of the wise men were,  
And we are not told whose gifts were gold  
Nor who's were the gifts of myrrh."

"We want you to place this cup in some conspicuous place in your study. And when patients are not pressing, and the evening shades are falling, and you are all alone, we want you to take a few drinks of that famous Grinstead mixture that has kept you young and happy these many years, light your pipe, and sit down in your easy chair. And as you look at this cup and contemplate all the sacrifices and labor that it has cost you to earn and deserve a cup of this character, no doubt it will recall many of the hardships you have undergone, many of the muddy roads you have traversed during the dark nights in answer to some call of distress. No doubt it will recall bitter disappointments in being unable to save the life of some dear friend.

"But as you look at this cup we trust that it will recall many pleasant memories—mem-

ories of the day you received your diploma from a medical school, memories of the day you fitted your office and swung your shingle to the breeze, memories of your first obstetrical case when you received a fee of \$5.00, memories of your first successful appendectomy, ovariectomy, or hysterectomy, memories of the days when you had become the most eminent physician and surgeon in Cairo, memories of the days when you would drive that blooded pair of high-stepping horses up and down the boulevards of this city, the cynosure of all eyes and the envy of your competitors, memories of the days when you were honored with the presidency of your county, district, and state societies, and memories of this meeting and the many eminent men who are assembled here to pay you this great tribute. It is our wish that you may be spared many more years of usefulness, health, prosperity and happiness. And when you have attended your last patient, and the curtain has been rung down, and your soul takes its flight to the God who gave it, we have no doubt that it will find Eternal Rest, Peace and Happiness."

Dr. B. S. Hutcheson said: "Dr. William Frank Grinstead was born about twelve miles from where he now lives. From his residence window he can see his native county in Missouri just across the Mississippi river from Cairo. He was born at Charleston, the county seat of Mississippi county. He was educated in the public schools and the Charleston Classical Academy, a flourishing educational institution in his home town in his boyhood. He got his medical training in the old Missouri Medical College, St. Louis, Mo., and in the medical department of Vanderbilt University, Nashville, Tenn. He graduated from the latter institution in 1877. He could not get an internship at that time so he took a position for a time behind the prescription counter in a drugstore. Later an internship in the City Hospital at Nashville, Tenn., where he graduated, was offered to him and he accepted it.

In addition to his internship service the Professor of Anatomy in the medical school discovered that Dr. Grinstead was spending some of his evenings in the dissecting room and making demonstrations to the class in anatomy. The professor approached Dr. Grinstead with an offer of the position of prosector to the Chair of Anatomy in Vanderbilt during the fall and win-



ter. Dr. Grinstead had scored the highest grade that was made by any member of the class in which he graduated. The offer was accepted. During that service the professor of anatomy announced to the class at the beginning of one of his lectures upon the cerebro spinal nervous system that a complete dissection of the spinal canal and exposure of the spinal cord with its nerves from the cranium to the sacrum had only been made twice in the history of the medical school. That the first one the professor had made himself; the other which was on the table before him, and which he then showed to the class, in demonstrating his lecture, was done by Dr. Grinstead.

#### BEGAN PRACTICE AT HOME

At the end of his internship he returned home and entered the practice of medicine and surgery. He disregarded the old saw that "A prophet is not without honor save in his own country." After a few years practice he felt a pressing necessity for hospital facilities. His home town was not large enough to support a first class hospital; therefore he moved over the river to Cairo, the only move he ever made. He said he wanted to give the home folks the best that was in him and that he don't consider he ever left home in crossing the river.

While in practice his attention was attracted to the work that was being done by surgeons and gynecologists in England. He had some of their books in his library. He arranged his affairs to have a semester in old St. George's Hospital and Medical School in London, England, where Henry Gray had written the greatest book on anatomy that had ever been published and where Timothy Holmes had written his wonderful System of Surgery and on the front steps of which the great John Hunter collapsed in angina pectoris. This old school and hospital was also the scene of Sir Benjamin Brodie's activities; also Robert Brudenell Carter and T. Pickering Pick.

#### TOOK COURSE ABROAD

At the termination of this course he returned home and took up his practice again. A few years later his attention was attracted to a spring course of three months in surgery at the Royal Infirmary, Edinburgh, Scotland, a hospital of 850 beds where clinical instruction was given to the classes in the medical department of the old

University of Edinburgh. He arranged to take this course and then came home and took up his practice again. Since then he has had several postgraduate courses in New York.

On opening an office in Cairo, he at once became active in co-operating with the Sisters of the Holy Cross in developing St. Mary's Hospital.

Dr. Grinstead himself in responding to the toasts remarked in part: "I have frequently been asked why I didn't quit practice. I tell them 'that I started out with the plan of life my mother helped me to lay out. I have worked out that plan, and if Father Gabriel tooted his horn tonight, he couldn't upset that plan. My work entertains me and I don't know what I'd do for entertainment if I gave it up. I like to see the results that come from it. I feel that I have a fund of experience valuable to the community in which I live, and unless I lose some of my faculties, I don't see why I should give it up.'" He outlined his platform, Ethical, Scientific, Service in Medicine and Surgery.

"One can be penniless and if in good health can get some joy and comfort out of life. Medical men stand by honor more than does any other class because doctors deal in human life and human health. It makes them feel honor bound in ways that others do not feel. Two problems interest me. One is the problem of the Quack, which can be solved by educating the Quack and by educating the public. Let the old fellow keep busy as long as he lives at something pleasant and entertaining to him, he said in closing. I want to be doing something until the old horn toots."

Dr. J. L. Wiggins, introduced as the Nestor of the doctors in East St. Louis, and a long personal friend of Dr. Grinstead: "The more I associate with him," said Dr. Wiggins, "the more I find he embodies the human virtues to which we all subscribe, and which we so seldom possess. During the World War, he was a member of the District Draft Board, and was made its chairman. He travelled night and day, giving his time, and you won't find a solitary voucher in Washington made out to Dr. Grinstead, for services.

"As a citizen of Cairo, you never found this man Grinstead loafing 'round the outskirts of human activity." He spoke of his service at the hospital, in the bank, on the streets. Every place

his finger touched is better for it, in the community, state and nation. "As a doctor, many would not be here if it hadn't been for his skill, industry and indomitable will. In the Southern Illinois Medical Society he has been a power."

Dr. Roland Hill, one of the foremost physicians of St. Louis, referred to Cairo's important position as the gateway to the south, the advancement in modern medicine that has been achieved south of this point, especially in the Panama Canal, and in the discoveries in the cause of malaria and yellow fever. "Dr. Grinstead forms one of the connecting links, by his work and example an inspiration both to the profession and to laymen."

"The greatest asset of all is Health. We should have a cabinet officer who is a Doctor, and when that is done, would anything be more appropriate than it turn to Cairo and select Dr. Grinstead for the post."

Dr. G. Henry Mundt, of Chicago, president of the Illinois State Medical Society, said it was an honor to attend the fiftieth anniversary of entrance into medical practice of a man like Dr. Grinstead. "Dr. Grinstead is pre-eminent in two things, he has equanimity and a full appreciation of the master word in medicine—work. I want you to know it is an honor for the Illinois State Medical Society to pay tribute to you."

Judge Albert Watson of Mt. Vernon, former Justice of the Illinois Supreme Court, with whom Dr. Grinstead served on the District Draft Board, said:

"I am pleased to add my tribute to my old friend. We made him chairman, and we had a man whose loyalty was never questioned and it never could be questioned. When the armistice was signed, each county in the district had reached its full quota, and we have the testimony from the war department placing this district in the No. 1 group, in which there was not a dozen in the United States."

"I think I know this man of pure life, and that he will walk the pathway of stars and will see God."

#### OTHERS ADD THEIR WORD

Dr. Hall read a number of telegrams from distant friends, among them from Dr. Rawlings, of the Illinois Department of Health, Chas. J. Whalen, Editor ILLINOIS MEDICAL JOURNAL, and from the Doctors Mayo of Rochester, Minn., and

then others, visitors, and local physicians, added their word, as many as the time would permit.

#### WE HAVE NO NEED FOR THE PRESENT CHILDREN'S BUREAU

THE FIGHT MADE BY ILLINOIS DOCTORS IS BRINGING RESULTS. COMMENDATION FROM A LAUDABLE SOURCE AS TO WHAT ILLINOIS MEDICAL JOURNAL IS DOING

In the fight waged everywhere by thinkers against the encroaching socialization of medicine there is no more able crusader than "The Woman Patriot," a journal devoted to patriotism and for preservation of the constitution. This journal is known internationally as an organ fighting paternalism, socialism, bolshevism, and similar evils.

There is an pardonable satisfaction to the editor of the ILLINOIS MEDICAL JOURNAL and to Physicians of visions everywhere in this communication received from Miss Mary Kilbreth, president of the "Woman's Patriot Publishing Company."

As the ILLINOIS MEDICAL JOURNAL led the crusade against the primary enactment of the Sheppard-Towner Bill, and as the Illinois State Medical Society was the only official medical organization represented at the congressional hearings, it would seem only just reward if abolition of that branch of the bill, known as the Children's Bureau, should be effected through the medium of the ILLINOIS MEDICAL JOURNAL and its editor and the noble assistance given by the members of the Illinois State Medical Society.

The vital straw showing which way the wind blows, may be found in the following letter from "The Woman Patriot." That the abolition of the Children's Bureau is not only a possibility but even a probability, and that in the not far distant future is a prophesy easily read between the lines of Miss Kilbreth's letter.

#### THE WOMAN PATRIOT PUBLISHING

Washington, D. C., January 15, 1928  
*To the Editor of The Illinois Medical Journal:*

Congratulations on the magnificent attack on the Children's Bureau! And gratitude! You can't think what heart it put into us all here—all of us from Senators to the staff of the Patriot Publishing Company.

I do really believe that your article (Decem-



ber, 1927) is the turning point in the fight. Men who hesitated to introduce bills in this congress to abolish the bureau agreed, after reading your article, to sponsor them. Of course, the article will be put in the congressional record and can then be franked out at a minimum of cost—in all the states, and the invaluable information spread all over the country.

As soon as Senator Bayard and Mr. Andrew and the other congressmen decide on text of their bills to abolish, and introduce them I will send you copies.

Probably Senator Bayard's bill will get in first and he plans to have your article inserted in record when he introduces the bill.

I can't tell you the effect of your article on every congressman to whom I took the copies you sent me. I took them to one after another and they all felt the effect on our fight would be incalculable.

I do dislike gush and am trying hard to keep some sort of self-restraint—but it is hard when one feels the enthusiasm I do now.

Yours very truly,

(Signed) MISS MARY G. KILBRETH,  
President.

#### 10,000 BIRTHS NOT REPORTED IN ILLINOIS

A study of all the factors which are considered in arriving at the infant death rate for Illinois, including reported births, reported deaths, U. S. Census estimates of our population show pretty convincing evidence that we are slipping in our birth reports.

What does this mean to the doctor? First he has failed in a duty to his family because a birth certificate may be needed to prove citizenship; to establish rights of inheritance of property; to establish proof of age for entering or leaving school, for entering military service, for securing working permit, for securing marriage license, for holding public office; to secure passports; to adjust insurance, and other financial benefits. Are your patients writing to the Department of Public Health asking for a certificate of birth only to be informed that the Department has no report of the birth?

What does it mean to the medical profession of Illinois? That we are charged with a higher infant death rate than we deserve. Infant death

rates are estimated on the basis of reported live births, that is, in 1926 for every 1,000 live births there were 71.5 baby deaths under 1 year of age. If we don't report our births, some one else will. The estimated total shortage for the State is about 10,000 and for Chicago the estimate is 1,154 short.

Is your local clerk or registrar sending in reports promptly to the State Department? It might be well to call his attention to this important matter.

#### CHIROPRACTIC AND SIMILAR LEGISLA- TION FOR THE DISTRICT OF COLUMBIA

The physicians of the District of Columbia have asked the various states to assist in opposing the enactment of Chiropractic and similar bills pending before the committee on the District of Columbia.

The council of the Illinois State Medical Society at its meeting in January instructed Dr. John R. Neal, chairman of the legislative committee of the Illinois State Medical Society to write Mr. Rathbone the member of the "committee on District of Columbia" from Illinois, voicing the sentiments of the medical profession of the state in opposition to the enactment of such legislation in the District of Columbia. The following is the letter of protest:

Jan. 21, 1928.

Hon. Henry R. Rathbone, M. C.,  
Washington, D. C.

My dear Mr. Rathbone:

My attention has been called to the fact that there are several osteopathic and chiropractic bills pending before the committee on the District of Columbia of the House, of which you are a member.

Illinois has definitely decided that every session of its Legislature for many years that a single law administered by a single board for all who wish to treat human ailment is the better plan for the public health, for the law here in Illinois, of which we are attaching a copy herewith, has been declared constitutional by the Supreme Court of Illinois on four different occasions, it being attacked by the cultists as being unfair, discriminatory, and unconstitutional.

A multiplicity of laws and of examining boards regarding the one subject, that of treat-

ing disease, is not only unwarranted but is dangerous as has been shown by the very lax administration of such laws in various states, notably Connecticut, where a scandal evolved from the wholesale traffic in licenses to treat the sick.

The Illinois State Medical Society sincerely trusts that you will be guided by the wishes of the fifteen thousand medical men in the state of Illinois in shaping a course for the District of Columbia along this very important subject. A careful perusal of the records of the Department of Registration and Education in Illinois will show that chiropractors and osteopaths are passing in almost the same proportion to the medical men in this state, according to their educational qualifications.

As the legislative representative of the Illinois State Medical Society, I have been asked to address this letter to you, and would very much appreciate a reply so that I may report your decision in the matter to the next meeting of the Council of our Society. If we did not conscientiously believe that the cultists were getting a square deal here in Illinois under the present law, we would not be asking you to oppose the present law as pending before Congress to liberalize the cult's activities in the District.

With kindest personal regards, I am

Yours very truly,  
Chairman Legislative Committee.

#### COURSE IN PUBLIC SPEAKING OFFERED ILLINOIS DOCTORS

The Educational Committee is contemplating offering a series of three lectures on "Public Speaking" at the State meeting to be held at the Stevens Hotel, Chicago, in May. Any members of the Illinois State Medical Society who might be interested in such a course, please notify the Educational Committee, 185 North Wabash Avenue, Chicago.

#### INCOME TAX RETURNS MUST BE MADE BEFORE MARCH 15—RULES, REGU- LATIONS AND PROPER PROCEDURE ARE OUTLINED HERE

Congress has under consideration, a bill proposing certain amendments to the federal internal revenue act of 1926. The original provisions of this bill make but few changes in the income tax law as it relates to the individual tax payer. Possibly the most important mentioned by news dispatches was a slight revision of the surtaxes.

Late dispatches from Washington, D. C., state that the Senate has postponed action on the proposed amendments until some time after March 15th, the last day on which income tax returns may be filed with the Collector of Internal Revenue.

Collectors of Internal Revenue have been notified by the Treasury Department to release the blanks for the 1927 income tax returns. These blanks have already been mailed to all taxpayers of record. Blanks should be made out according to the regulations which governed the 1926 returns. A summary of these regulations will be found in subsequent paragraphs of this article.

Every physician whose net income for 1927 was \$1,500 or more, if single, and \$3,500 or more, if married, must file an income tax return. These forms must be filed with the Collector of Internal Revenue on or before March 15th. All physicians and other professional men are required to use Form 1040 in submitting their return, regardless of the amount of net income.

Blank forms are mailed to physicians, whose names are on record, by the Collector of Internal Revenue in the respective districts. Failure to receive a blank does not relieve a physician of responsibility to file. If blanks are not received, application should be made at the internal revenue office of the district in which the physician resides. These districts, together with the name and address of collectors, are outlined elsewhere in this article.

Data for income tax returns, internal revenue officials say, should be arranged on separate sheets under the following classifications: Gross Income; Exemptions; Net Income; and Tax Computations.

#### Gross Income

Gross income includes gains made from professional services, business activities, certain forms of dividends, bad debts charged off in previous years but since collected; bonuses received as compensation; incomes from business; certain kinds of dividends; interest partnership profits; profits from sale or exchange of real estate; rents and royalties; and funds received from other sources.

#### Exemption, Personal and Deductible Items

If married and living with wife, or head of a family for the entire year, an exemption of \$3,500 is allowed; if single and not at head of family, an exemption of \$1,500 is permitted. In case of change of marital or head of family status during calendar year, the personal exemption is prorated over the period of married, head of family or single state. An exemption of \$400 is permitted for each dependent under 18 years of age, or each physically or mentally handicapped dependent, regardless of age.

#### Office Rentals

If a physician pays rent to another person for office space, he may deduct the amount; if he owns his home and maintains an office in it, he cannot claim deduction for office rent.



### Automobile

The cost of repair and upkeep of an automobile used in professional visits may be deducted. The salary of a chauffeur, if most of his time is spent in driving on professional calls, may be deducted. Sums spent for taxi hire, car fare, etc., while on professional calls, may be deducted. The total cost of an automobile used in professional calls, may be depreciated. Take the cost price and divide by the number of years of its usefulness and deduct this amount annually in income tax return.

### Assistants

Deductions are permitted for the salaries of nurses, laboratory workers, technicians, assistants, stenographers or other clerical workers in offices so long as their duties are connected with professional work. Wages paid maids for taking care of office, as well as sums paid persons for services rendered in connection with practice, are deductible.

### Medicines, Instruments, Supplies

Medicines used in the office to treat patients, medicines dispensed, bandages, laboratory materials and all other supplies necessary to operate office may be deducted. Upon surgical instruments, one-fifth of purchase price may be deducted annually for five years under depreciation account. All office fixtures, appliances, etc., used in office or laboratory may be depreciated annually, according to the estimated life of their usefulness.

### General Office Expense

Cost of telephones, telegrams, etc., used in professional services may be deducted. Expenditures for heat, light, water, etc., are deductible. Office fixtures and furnishings may be depreciated 10 per cent annually. Original cost of medical books may be depreciated 10 per cent annually, since the life of these is usually considered 10 years.

### Professional Dues

Dues paid to professional associations to which, in the interest of his profession, he belongs are exempt and may be deducted. Subscription prices of scientific journals are also deductible. Expenses incurred in attending scientific meetings or taking post-graduate courses have been held by the Commissioner of Internal Revenue, not to be deductible items.

### When to Deduct Debts

If the physician's books are kept according to the "Cash Receipts and Disbursement" system, he may not charge off any unpaid debt because he is then only reporting as gross income those accounts which have proved to be good. Bad accounts have not been reported and are therefore, not deductible.

If books are kept on an "Accrual Basis" (where expense is actually incurred and payable even though not yet paid, or income earned although not yet collected) it is permissible to charge off all debts

which have been definitely ascertained to be worthless during the fiscal year covered by the report.

In the same way, the physician is permitted to claim deduction for all other expenses within the scope of his profession, and the amount of his tax is determined on the net income which remains after all these items have been deducted.

### Taxes, Licenses

Any tax paid upon materials required in professional work are exempt. All license fees which physicians are required to pay are deductible items. This includes the narcotic tax, automobile license, local occupational taxes, etc.

### Other Allowable Deductions

All taxes paid upon real or personal property whether the property is used for business or otherwise, and all interest paid upon indebtedness (except interest paid to carry nontaxable securities) are deductible. It is permissible to deduct from gross income contributions when made to charitable, religious, educational and scientific organizations, to an amount not to exceed 15 per cent of the net income, exclusive of such contributions.

### Items Not Reportable as Income

Allowances received under the War Risk Insurance act; bequests; damages received in personal actions; dividends on stock of federal reserve banks, land banks and intermediate credit banks; dividends from exempted building and loan associations up to \$300; dividends from corporate earnings accumulated prior to March 1, 1913; gifts; inheritances; insurance proceeds; state court jury fees; state court receivership fees; life insurance proceeds; and stock dividends and rights.

All interest received from obligations of a state or political subdivision thereof; from securities issued under the Farm Loan act; interest on Liberty 3½% Bonds and U. S. Bonds issued prior to September 1, 1917, and interest on the obligations of the possessions of the U. S. need not be included in the computation of gross income.

Interest received on Liberty 4% and 4½% Bonds and certain other U. S. obligations is exempt if the total holdings up to July 2, 1926, is not in excess of \$50,000. After that date all interest received on such obligations in excess of \$5,000, total holdings, is reportable. All interest received on U. S. Treasury notes must be reported. However, all interest received from these sources, which is reportable as income, is subject only to surtax.

### Normal Tax

The normal tax rate is 1½% for the first \$4,000 in excess of exemptions and credits; 3% on the next \$4,000 in excess of exemptions and credits; and 5% on the balance over and above the first \$8,000 in excess of exemptions and credits.

### Surtax Rates

In addition to the normal tax provided above, a surtax is levied on net incomes of \$10,000 and over.

The percentages in these follow: \$10,000 to \$14,000, 1%; \$14,000 to \$16,000, 2%; \$16,000 to \$18,000, 3%; \$18,000 to \$20,000, 4%; and an additional 1% for each \$2,000 added up to \$24,000. After \$24,000 each \$4,000 increase is subject to an additional 1% surtax until \$64,000 is reached when there is another change in brackets.

### Earned Income

Earned income is fixed at a lower rate than income from sources other than "earned." Earned income may consist of salaries, wages, commissions, professional fees and other amounts received for personal services actually rendered, or an amount not in excess of 20% of the net profits derived from a trade or business in which both personal services and capital are material income producing factors.

If the business requires only a nominal capital and the income is derived principally from the personal services of the taxpayer, as a doctor or lawyer, the entire profits, not exceeding \$20,000, may be considered as earned income. The first \$5,000 of net income constitutes earned income no matter from what source derived.

In order that the earned income may be taxed at a lower rate, such income is included with income from other sources, and the tax figured thereon. The tax is then figured on the earned net income alone, and 25% of that tax is used as a credit against the tax on the entire net income. This credit is termed an "earned income credit" and in no case may it exceed 25% of the normal tax on income from all sources plus 25% of the surtax on the earned net income.

### Example of How Computations Made

Suppose a physician has been married throughout the year, has no dependents, rents his home and his office. He compiles the following data:

Gross income from professional service.....	\$18,000.00
Depreciation of office fixtures, etc.....	500.00
Office help, etc.....	2,000.00
Telephone, Heat, etc.....	500.00
Occupational tax, licenses, etc.....	100.00
Auto cost and depreciation, etc.....	1,000.00
Drugs, bandages, etc.....	3,000.00
Scientific Journals, etc.....	400.00
Railway fares on professional calls.....	500.00
Office rent .....	1,500.00
Miscellaneous expenses .....	100.00
Total expense .....	\$ 9,600.00
Gross income from other sources:	
Rent from apartment house.....	10,000.00
Overhead, taxes, etc.....	8,000.00
Total Gross Income.....	\$28,000.00
Less deductible items for professional services....	9,600.00
Less deductible items incident to apartment building income .....	8,000.00
Net income, \$28,000 less \$17,600.....	10,400.00
Less personal exemption.....	3,500.00
Income subject to normal tax.....	\$ 6,900.00
Taxable at 1½%.....	4,000.00
Taxable at 3%.....	2,900.00
Normal 1½% tax on \$4,000.....	\$ 60.00

Normal 3% tax on \$2,900.....	87.00
Total Normal Tax.....	\$ 147.00
Surtax (1% on net in excess of \$10,000).....	4.00
Total Normal and Surtax.....	\$ 151.00
Less Earned Income Credit (See Computation).....	21.75
Net Tax Liability.....	\$ 129.25
COMPUTATION OF EARNED INCOME CREDIT	
Total receipts from practice.....	\$18,000.00
Expenses incident to practice.....	9,600.00
Earned Net Income.....	8,400.00
Less exemption .....	3,500.00
Subject to normal tax.....	\$ 4,900.00
Taxable at 1½%.....	4,000.00
Taxable at 3%.....	900.00
Normal 1½% tax (on \$4,000).....	60.00
Normal 3% tax on (\$900.00).....	27.00
Total tax on Earned Net Income.....	\$ 87.00
Twenty-five % credit (earned net income).....	\$ 21.75

O. S. M. J.

### RELATION OF VOLUNTARY HEALTH AGENCY TO PHYSICIANS AND HEALTH DEPARTMENTS

Linsly R. Williams, New York (*Journal A. M. A.*, July 9, 1927), states that the voluntary health agencies have not formulated a definite policy that is the same throughout the country, yet there are certain similarities which may be expressed as follows: In general, they conceive of their function as being one of investigation, the inauguration of a new activity, the demonstration of its usefulness, transferring the activity to the official agency or discontinuing it. In certain places where the governmental authorities have not made any provision for the care of the sick, the voluntary agencies have carried on a continued activity for the care and relief of the sick poor. A voluntary health agency organized for the purpose of assisting in the prevention of tuberculosis desires aid in the situation, and its first problem is to determine how many cases of tuberculosis there are in the community. This is the period of investigation. This study is known as a tuberculosis survey and should be made with the knowledge and assent of the health authorities. It is usually found as a result of such surveys that there is a far larger amount of tuberculosis in the community than is suspected by the physicians or health authorities. It is then suggested, perhaps, by the voluntary health agency, that the official health authority should create a local dispensary for tuberculosis or a special class for tuberculosis in the existing out-patient department of a hospital, or that a special hospital should be created in the county for tuberculosis or a special pavilion for tuberculosis should be established in connection with the municipal hospital. Whichever of these activities is agreed on is recommended to the local board of health, community council or county board with the usual reply that funds are not available and it is not necessary, that the people won't stand for it, etc. The voluntary agency then determines perhaps to establish a dispensary in the community, and its organization is worked out with the knowledge and advice of the



health officer and is maintained for several years. During this period, it is found that a number of cases need institutional care and no place is available for them. An effort is then made to transfer the maintenance of the dispensary to the local health department and very commonly with success, and as it has been shown that hospital beds are needed, another effort is made to bring about the creation of a special tuberculosis sanatorium or pavilion at the general hospital. This work may be called the period of inaugurating an activity and a demonstration of need. During this period, the relationships between the health department, the voluntary agency and the medical profession have pushed themselves into the foreground because the health department has insisted on certain regulations for the administration of the dispensary, a private agency, and the local medical society has demanded certain privileges in regard to work in the dispensary or exacted certain conditions in regard to the payment of the dispensary physician and his method of appointment. There are two essential difficulties which must be met in the future: 1. The health department and the voluntary agency desire to see diagnostic facilities and adequate medical care provided for every individual in the community. Theoretically, the private practitioner has a similar desire, but feels that every one in the community should have his own private physician. The health department and the voluntary agency advertise their clinics and health stations and do everything in their power to increase their trade. The private physician, on the other hand, may do nothing but wait until the patient calls. 2. The health department and the voluntary agency desire to show in their annual reports the largest number of new applicants and total visits possible, irrespective of financial status of their clients.

#### NAMES FIFTEEN GREATEST PHYSICIANS

The fifteen greatest physicians of all time are named by *Hygeia*, popular health magazine published by the American Medical Association, in its March issue. The names are taken from a list recently made by medical historians in an effort to name the five greatest contributors to the advancement of medicine.

Some of these men are not really physicians, in the sense that they have practiced medicine or have obtained a medical degree. Their contributions are in fields closely related to medicine. *Hygeia's* list is as follows:

1. Hippocrates, father of modern medicine, whose school and writings formulated our knowledge of medicine.

2. Galen, who described the action of the heart valves, elevated the status of the medical profession and collected the knowledge of his time in a system of medicine which was followed by physicians for centuries.

3. Leonardo do Vinci, artist and inventor, who contributed greatly to the science of anatomy.

3. Vesalius, father of modern anatomy.

5. William Harvey, representative of the renaissance

of medicine, who first described scientifically the circulation of the blood.

6. Sydenham, greatest figure in medicine of seventeenth century, who wrote excellent descriptions of several disease conditions.

7. John Hunter, father of surgery.

8. Auenbrugger, who first described the method of tapping the chest for the determination of conditions beneath the skin.

9. Laennec, who first described use of the stethoscope for listening to sounds within the chest.

10. Pasteur, father of the conception of bacteria as the direct cause of many diseases.

11. Robert Koch, discoverer of the tubercle bacillus, who established bacteriology as a science.

12. Lister, who showed how bacterial infection may be prevented.

13, 14 and 15. James Young Simpson, William Morton and Crawford Long, who first made use of anesthetics and made surgery painless.

#### SILKWORMS AND "SAKE"

According to the *Osaka Daily News*, a discovery respecting the feeding of silkworms has been made by Mr. Nakai, expert of the Okayama Prefectural Laboratory for Sericulture. He found a way to feed the worms on wheat flour and "sake," an intoxicating drink made from rice. In tests during the past two years, he found that the consumption of mulberry leaves is greatly reduced if the worms are fed by his method. When 30 Gm. of "sake," mixed with about ten times as much water and some flour, was given to 400 worms a saving was made of about 60 per cent in the total of mulberry leaves required by the worms. The method is a benefit not only from the economic but also from the technical point of view, because the alcohol seems to improve the condition of the worms.—*Japan Letter—Journ. A. M. A.*

#### BACKACHE IN WOMEN

Statistics show that backache leads as a predominant symptom which results in a visit to the gynecologist; it is such a predominant symptom in 18 per cent of the cases. Discharge accounts for 15 per cent, low abdominal pain for 11 per cent and excessive flowing for 10 per cent.

Derangement of the pelvic organs are important in the cause of low backache. Circulating disturbances, associated with displacement of the womb, causes backache. Pressure is the basis, the forward displacement, cervicitis and incarcerated pregnant fundus are also causes, but are not always true symptoms. Dysmenorrheas complain of backache, representing perhaps the only group consistently associated with definite gynecological conditions.—*International Medical Digest.*

#### SAFETY FIRST

"I think I'll commit suicide."

"Good, but turn off the gas when you're through."—*Bison.*

## Original Articles

### THE X-RAY DIAGNOSIS OF CANCER OF THE ESOPHAGUS\*

P. M. HICKEY, M. D.,  
ANN ARBOR, MICHIGAN

Even in a cursory review of the literature on cancer of the esophagus, one is impressed by two striking facts; first, the high mortality of cancer of the esophagus, placed by most writers at 100%; second, the fact that most cases present themselves for diagnosis and treatment when the condition is far advanced. In many diseases where the mortality is high, the first step in lowering the mortality is to advance the time of diagnosis. Tuberculosis was conquered when we learned to make the diagnosis in the early stages. In appendicitis, peritonitis is avoided by an early diagnosis. Accordingly, one of the first steps in the attempt to reduce the mortality of carcinoma of the esophagus, is to be able to diagnose this particular lesion much earlier than is done at the present time.

The diagnosis of cancer of the esophagus rests first, upon the clinical history; second, upon the x-ray examination; third, upon esophagoscopy, and fourth, by biopsy. Chevalier Jackson, in his classic monograph entitled "A Plea for Early Diagnosis in Carcinoma and Sarcoma of the Esophagus" accentuates the fact that the early subjective symptoms are often so fleeting and seemingly unimportant that they fail to send the patient for early examination. In this same article Dr. Jackson emphasizes the importance of the two types of examination, i. e., the Roentgen-ray examination and the esophagoscopy.

The diagnosis of cancer of the esophagus by the x-ray has unquestionably been a subject of just criticism. The technique at first was crude and consisted simply in observing fluoroscopically the patient swallow an opaque fluid. Even careful examination would not detect slight evidences of obstruction. Accordingly, it has been considered that the x-ray would not pick up the evidence of early neoplasm of the esophagus while the amount of obstruction was small. Stewart, in an attempt to remedy this lack of accuracy, suggested that hog casing be filled with opaque fluid. This was a valuable suggestion but on account of the difficulty of its application it

has not been used to any extent. The substitution of a very thick mixture such as barium rubbed up with mucilage of acacia has resulted in better results on account of the longer delay in passing through the esophagus because of the stickiness of the fluid. The recumbent oblique position described by Dr. Manges has been found very useful and has added much to the accuracy of the examination.

In observing the passage of the various types of fluids down the esophagus, small neoplasms will cause such minute alterations in the lumen of the esophagus that the lesion may escape observation. In order to make evident such slight alterations in the width of the esophagus, the writer makes use of bougies of barium gelatine. Ordinary cooking gelatine is allowed to soak in cold water until it has swelled to its full size. It is then melted over a water bath and the liquid gelatine is mixed with barium. The barium is thoroughly mixed so as to avoid any grittiness in the resulting mass. The barium gelatine is then poured into a cup and allowed to jell. After jellification has taken place bougies are cut out of the barium jelly by means of cork borers of different sizes. There results then, bougies of a diameter varying from three-fourths of an inch to three-eighths of an inch. The patient is then given the smallest one of these bougies, and its passage from the mouth to the stomach is watched with the fluoroscope. Successive bougies of increasing size are then tried until the caliber of the esophagus has been fully tested. Formerly we used the barium capsules but these had the disadvantage that they did not outline well the lumen of the esophagus and if they did meet an obstruction were a source of considerable discomfort to the patient until the hard gelatine dissolved. With these soft gelatine bougies, the heat of the body will cause them to melt in two or three minutes, so that even if an obstruction is encountered the delay does not cause the patient discomfort. If a narrowing is encountered the patient can then be given a swallow of the usual opaque fluid and the barium bougie acts as a plug at the point of obstruction and the lumen of the esophagus above is well demonstrated. With this procedure, the writer is of the opinion that very much smaller lesions can be detected than by the use of the fluid and that their employment offers a very useful addition to the other methods of

\*Read before the Section on Radiology, Illinois State Medical Society, Moline, Illinois, June 1, 1927.



fluoroscopic examination. The lumen of the esophagus at its various points can be very accurately gaged and the diameter expressed in measurements corresponding to the diameter of the bougies.

The ease of the x-ray examination of the esophagus varies with the locality where the lesion is small. The esophagus may be roughly divided into three sections, the upper third, middle third, and lower third. Carcinoma of the upper third presents the greatest difficulties to the roentgenologist in his demonstration. Carcinoma of the middle third of the esophagus is much easier of demonstration than a neoplasm in the upper third, while the cardiac portion of the esophagus lends itself most easily to the examination.

In the fluoroscopic examination of the esophagus, the favorite position is, of course, the left oblique. The mixture should be observed fluoroscopically during the passage down the esophagus while the patient is breathing. It is, of course, very useful to request the patient to take a long breath and hold it as long as possible. This procedure usually pinches off the abdominal portion of the esophagus and while it introduces an apparent cardiospasm, still the short period of exposure permits of detection of small irregularities of outline. The right oblique is perhaps of even greater value, especially if the observation is made during full inspiration, as in this position the dome of the diaphragm, when depressed as low as possible, permits of a better outline of the lower third of the esophagus.

The writer has found the serial plate method of advantage in studying the contour of the esophagus during various stages of deglutition. This method of examination is, of course, carried out more easily if the patient is in either the prone or supine position. In the diagnosis of lesions of the esophagus one must consider the differential diagnosis between carcinoma of the esophagus, pharyngeal diverticulum, esophageal diverticulum, traumatic strictures either with or without a foreign body, and cardiospasm. Of secondary importance are intrusions produced by mediastinal neoplasms without actual involvement of the esophagus.

While the clinical symptoms of pharyngeal diverticulum are often times suggestive of esophageal carcinoma, the x-ray examination is decisive. The esophageal diverticulum usually pre-

sents slight clinical symptoms and is usually found in routine examinations. Strictures of the esophagus due to either mechanical or chemical traumatism usually present a clear cut history. If there is a well defined history of stricture due to chemical trauma and there suddenly intervenes a more or less complete obstruction, one should always consider the question of a stricture and an impacted foreign body. An impaction of either boluses of meat or other solid foods should, after the removal of the same, always be followed by a careful examination to determine whether the impaction may not be due to the slight closing of the lumen from a developing neoplasm. The differential diagnosis between cardiospasm or as it is sometimes spoken of as preventriculosis, and carcinoma is usually easy since the appearance of each is quite typical. However, there are border-line cases where the ingenuity of the examiner will often times be taxed to the utmost.

In the attempt to diagnose carcinoma of the esophagus in its early stages, there should be the most active co-operation between the roentgenologist and the esophagoscopist. Either method should not be relied upon to the exclusion of the other, but each should be employed to supplement the other. There should be a determined effort to have all suspicious cases examined immediately. There should be included in the literature of the cancer propagandists a full description of the very earliest symptoms of the esophageal obstruction or perhaps we should say of esophageal discomfort. Only by arousing the general profession and the laity, will the cases be secured earlier. It is not in the function of this paper to discuss the question of the treatment of carcinoma of the esophagus further than to deplore the attempt at radiation therapy in advanced cases. It is obviously futile to introduce radium into an esophagus which is practically closed. Theoretically radiation treatment should be of great advantage because the usual type of esophageal carcinoma is of rather slow growth if not irritated and does not tend to metastasize. Obviously, if the form of radiation could be applied directly to the neoplasm and not above it or below it, the result would be much better. Platinum screened radium emanations would seem to offer the most hope at the present time. Mechanical dilatation of the neoplasm is

condemned by most authorities. A well executed gastrostomy performed early in the progress of the case contributes much to the comfort of the patient and to prolonging his life. Gastrostomy performed as a last resort when the patient is in extreme pain, is usually productive of discomfort and is to be considered as very ill-advised.

#### Conclusion.

1. The high mortality of cancer of the esophagus is a reflection on both the diagnostic and surgical ability of the profession.

2. A conscientious effort should be made to induce patients with esophageal symptoms to seek an early examination.

3. The roentgenologist should study and apply all the refinements of his art towards securing an early diagnosis.

4. There should be the most intimate and cordial co-operation between the roentgenologist and esophagoscopist in the study of this condition.

5. The application of unfiltered radium in the esophagus should be deplored.

6. Gastrostomy should not be recommended in terminal stages of the disease.

#### DISCUSSION

Dr. E. G. C. Williams, Danville: Dr. Hickey's presence here as our guest is significant from two viewpoints. One is that he has given an excellent talk which has covered so much concerning the diagnosis of cancer of the esophagus. There is not much left for discussion.

I think one of the significant points is that it gives an impression of the increase in value and use of radiology in the teaching of medical work. In our county every year we make a survey of the physicians in the county as to average year of graduation and average age. The average age of the physicians in our county is fifty-three. The average year of graduation is 1901. Having been graduated in 1910, I am relatively one of the younger ones.

In 1910, when I graduated from the University of Michigan, our class was led to the basement of the hospital where we saw an x-ray, some sparks, something through a fluoroscope. That was all the teaching there was. Dr. Hickey's predecessor was a man of unlimited power for work and immediately started building up the department. As a result of his work, that of Dr. Hickey and other men working in the medical school, they have developed such technique as has been shown us this morning for the diagnosis of these conditions.

He has left little for discussion, and if I may I would like to thank Dr. Hickey for appearing among us.

Do you use atropine in the differential diagnosis

between cardiospasm and carcinoma? I would like to also make inquiry regarding the legal side in some of the accident cases or cases of death among industrial people in connection with cancer of the esophagus. I know Dr. Allison, of Danville, has had some experience in the past month concerning which he may make some remarks.

Dr. Emil G. Beck, Chicago: Some years ago I was fortunate enough to be in New York City when a symposium on carcinoma of the esophagus was given by the celebrities of the East.

It started with Dr. Ewing, who showed post mortem specimen of esophagus cases, and Dr. Jackson demonstrated the method of examination of the esophagus by means of the esophagoscope. A medical man and a roentgenologist showed how to apply radium in the esophagus. Then William Meyer read a paper on the surgical treatment of carcinoma of the esophagus. I will repeat what I said when asked to discuss: I said: "If I had cancer of the esophagus I would first go to Dr. Cole and Dr. Jackson to have it diagnosed. Then I would have it examined by Dr. Rinehardt, then operated by Dr. Meyer. Then I would get the post mortem specimen from Dr. Ewing."

So it is with the art of treatment. Dr. Hickey, I believe, said there should be no unnecessary surgery done because the patient is very miserable as it is. I too believe the patient is better off with morphin and without operation. I made some attempts several years ago in the treatment of carcinoma of the esophagus by means of surgery. I made a wide incision in the stomach transversely so I could inspect the entire inner surface of the stomach, including the cardia, with the speculum. With a carcinoma seated very near the cardia radium was applied directly to the opening under direct inspection. We operated on four cases in that way. One of them lived two years and three others died several months after the operation.

Dr. Thorek of New York, some ten years ago, removed a tumor from the esophagus of a patient who is still alive.

Dr. Aaron Arkin, Chicago: There are a few points regarding esophagus carcinoma which I would like to mention. One is, that the carcinoma rarely produces metastases. I have had occasion to see twenty-five esophagus carcinomas. I have been impressed that metastasis rarely occurs if a method could be devised for reaching the esophagus; hence these cases would offer excellent prospects of cure.

I had occasion to see a very interesting case six months ago with carcinoma of the right breast. It had been operated on five years ago and was an apparently cured case. The woman was getting along well until she developed difficulty in swallowing. She came to the first medical clinic of the University of Vienna. On examination, I was greatly surprised to find a complete darkening of the right thorax. The history of the operation and the scar gave us a clew as to the diagnosis in this case. We made the diagnosis of carcinoma of the pleura secondary to carcinoma of the breast, and suggested that a puncture be done.



This was done and 1500 cubic centimeters of a hemorrhagic fluid obtained from the right chest.

Following that puncture a very interesting picture was found, numerous horizontal fluid levels, indicating free fluid with various carcinomatous pleurisy adhesions. We gave the patient barium in liquid form and found a stenosis of the esophagus. At one of the fluid levels the esophagus ended in the form of two points, was slightly narrowed, rather sharply outlined, not zigzag or rat-eaten, as we expect in a malignant carcinoma of the esophagus. The fluid happened to be at this level (illustrating). I suggested to the clinician he do another puncture and see the patient the next day. The stenosis remained at the same level. The patient was transferred to the Eiselsberg clinic. We made the diagnosis of a carcinoma of the pleura secondary to carcinoma of the breast with extension to the mediastinum and secondary stenosis of the esophagus. The pleura carcinoma had surrounded the esophagus and constricted it, as was shown by the autopsy done one month after operation. Death was due to pneumonia.

The mucosa was intact, the esophagus had been surrounded and constricted as though tied with a string.

I have seen no such case in the literature. It has not been published, but I think it is interesting. It illustrates that following carcinoma of the pleura, even on the right side, the process can extend to the mediastinum, surround the esophagus and compress it, as I showed.

In twenty-five cases of esophagus carcinoma which we saw in three and one-half years, we found that carcinoma of the esophagus was much more common in men than in women. One out of three cases were in women.

I wish to emphasize the possibility of peptic ulcer of the esophagus. I have seen three cases where we could demonstrate the ulcer. One was associated with cardiospasm. One word about cardiospasm. I have seen two cases of ulcer of the stomach with a reflex cardiospasm. A third case of cardiospasm was associated with a carcinoma of the pyloric region.

Dr. O. W. Allison, Danville: What proportion is there of cases of carcinoma of the esophagus in which there is no stricture?

I wish to mention a case of a man of fifty or sixty years of age who died without any stricture; only difficulty in swallowing. There was no stricture, no regurgitation of food, only stomach contents came up and that was vomited. This was a medico-legal case and I feel sure he had no carcinoma of the esophagus.

Dr. Henry Schmitz, Chicago: Whenever Dr. Hickey reads a paper we learn something and I am happy to be present this morning to listen to Dr. Hickey.

Two thoughts came to my mind while he was reading his paper. The first one was: "Why is it that we see cancer of the esophagus so late?" The second one: "Is radiation really an indicated treatment. Carcinomata of the esophagus are seen by me in the medical and surgical departments of the Mercy Hospital in a

consulting capacity as the radiation therapy department is attached to the department of gynecology. The observation is that these patients usually come very late for diagnosis and treatment. The first symptom the patient usually noticed was a difficulty in swallowing a rather large morsel of meat. This often may have occurred from four to six months prior to admission to the hospital. This seems to be the first sign and the medical profession must recognize it and pass esophageal bougies, and have fluoroscopic and x-ray examinations made of the esophagus while an opaque solution is passing down the gullet. Only then can we render an early diagnosis.

The result of treatment in the advanced cases of carcinoma of the esophagus can only be a palliative one. The esophagus should be dilated or a gastrostomy may be performed to prevent death by starvation.

Radium treatment also is only palliative. Should radium or x-rays be used? We employed every possible technique in the application of radium either in capsules or needles. The conclusions are that radium is not the method of choice in the palliative treatment of esophageal cancer. However this is not the fault of radium, as a localized cancerous lesion of the esophagus can be successfully arrested with radium but the disseminated carcinoma cannot. Recently we have attempted to treat such cases with short wave x-rays. Whether the results promise better palliation I do not as yet know. Two patients are under our care at present. The impression appears to be that both patients swallow better and are perceptibly relieved of pain. They have also gained in weight and strength.

Dr. O. W. Allison, Danville, Ill.: I just want to ask one more question. How soon may we expect that difficulty in swallowing?

Dr. Preston M. Hickey, Ann Arbor, Mich.: It seems to me with regard to radium treatment in the esophagus that you have, for example, a certain point of obstruction; at this point you place a radium capsule and it lies above the point, then the radium is influencing the more or less normal mucosa and you are really not treating the carcinoma. We will not get very far in the treatment of carcinoma of the esophagus by x-ray or by radium unless we get the lesion at a much earlier date, before you have the problem of ulceration. Because with ulceration, perhaps intensified by the radium treatment, you get a perforation and mediastinitis, which is very rapidly fatal.

I was struck, in looking over the literature, by the reports of an eastern clinic, where they see many cases of carcinoma of the esophagus. The cases presented themselves so late that the average duration of life was only about a month or two months.

Referring to what Dr. Beck said about gastrostomy, I think the operation devised by Dr. Wetzel gives the patient much relief. We had half a dozen of these cases in the last year, and the patients gained weight and left the hospital in much better shape than when they came in, because the carcinomatous tissue is put at rest. I have a photograph of one man who is able to feed himself and who has gained weight.

With regard to the proportion of males to females, I think it runs in various clinics about twelve to four so that the preponderance of male patients is really striking.

With regard to the question as to when obstruction occurs in swallowing, I think it can occur quite early. You may have a growth which interferes with the musculature of the esophagus even before you have actual obstruction to the lumen. I think the important thing about all this is to stress the symptoms of carcinoma of the esophagus to the lay public.

The lay literature says, "If you have a small lump in the breast or if you have bleeding other than at the menstrual period, go to see your doctor." If you could get the laity impressed with the fact that they should be examined when they have, as Jackson puts it, discomfort, even though it may be fleeting at times, much more could be done. I think Dr. Jackson in that monograph published in the *American Journal of Medical Science* of 1925 gives among the earlier symptoms "the fleeting discomfort." If we could get that idea in the literature of the cancer propagandist, we may probably be able to do something for a condition which at the present time, I think, is a sad reflection on the medical profession.

I would like to thank this section for the very generous reception they have given me and to express my pleasure at being here.

## THE IRIDOTASIS OPERATION FOR GLAUCOMA\*

(Some deductions after eight years.)

MICHAEL GOLDENBURG, M. D. .  
CHICAGO

This report is an attempt to briefly outline some observations and surgical experiences with the glaucoma problem. In the 105 cases here recorded, the iris incarceration technique (iridotasis) was used, with results that may be readily interpreted. To submit a minute detail report in every case would require much space; monotonous repetition that would seem unnecessary. In the summary charts presented it has been the aim to depict the factors of greatest import to those interested in the glaucoma syndrome, particularly from a surgical standpoint. The indications and surgical technique used have been reported by this writer in previous papers<sup>1</sup> and may be ignored at this time.

The antagonistic arguments presented by some writers, based on the unsurgical principle involved, that is, the incarceration of the delicate

iris tissue in a limbal wound, would appear to have run its course. Although some still insist on maintaining this attitude, it is not based on clinical results, which, after all is said and done, is the only factor that interests the sufferer with glaucoma. One may grant to the speculative theorist grounds for academic discussion, but such discussion should not unduly influence the clinician. The resultant value of this operation has been thoroughly demonstrated to this reporter for more than eight years. That this or any other operation devised is not a cure-all for glaucoma, all reporters of clinical experience will agree; no more than a decompression operation is a cure for an intracranial neoplasm. That we frequently overcome the symptoms resulting from fluid accumulation by more simple surgical means must also be conceded, but that we have not permanently removed the factor which permitted or caused this fluid stasis must be admitted. In fact, I am inclined to think that some relapses met with shortly or some time after a well performed operation has been done, are nothing more or less than the precipitation of another glaucomatous attack. The manifestation of symptoms being due to an inadequate avenue for fluid escape present or established by the surgical procedure.

I have at this time under observation three cases that pertinently illustrate these points. These cases were operated on about four years ago; the intraocular pressure has been continuously below 25 mm. Hg., by Schiotz, yet they frequently report vague and indefinite symptoms which one may flippantly attribute to neurasthenia, but I am inclined to think that they have repeated attacks of drainage interference. The eyes remain white, subconjunctival drainage is distinctly evident, and vision is retained.

On the whole, my personal experience with the iridotasis operation has been very favorable; by that I do not mean to infer that every case has been as happy as one would desire. But I am firmly convinced that this operation has given me less grief over a longer period than any other operation so far devised.

Dr. Johan Borthen of Bergen, Norway, in a personal communication, makes the following statement (verbatim):

"I myself have since 1908 made 426 iridotasis operations and the results have been so good that

\*Read before the Section on Eye, Ear, Nose and Throat, Illinois State Medical Society Meeting, Moline, June 1, 1927.

1. *American Journal of Ophthalmology*, September 1920.  
*American Journal of Ophthalmology*, May, 1923.



I have not been tempted to use other operations when only the eye has not been inflamed or the iris atrophic."

In analyzing the following charts due consideration must be given to the fact that many of the cases here recorded are from my service at the Illinois Charitable Eye and Ear Infirmary, where the very worst type of cases from all over the state eventually migrate. Many of these cases should have been enucleated, but an attempt was made to ascertain if drainage could be established by this procedure.

The value of this operation in the different types of glaucoma may be briefly summarized as follows: The results are more brilliant in the congestive (inflammatory) type, and less brilliant but equally favorable in the non-congestive (simplex) type. It would seem that the higher the intraocular pressure the greater the drop after operation, which also seems to be borne out by experimental evidence.

There is still much debate on the incident of drainage following this operation, some contending that drainage takes place into the subconjunctival spaces, while others hold to the theory that the traction of the iris upward widens or stretches the spaces of Fontana below, thus permitting a freer intraocular escape of the aqueous. Dr. Borthen is of the latter opinion and has submitted the following experiment to maintain his theory: In a blind eye with marked elevation of pressure over a long time, he incarcerated the iris in a corneal incision near the limbus. To exclude any possibility of subconjunctival drainage he later further sealed the prolapsed iris with the electro-cautery and the tension has remained down for a number of years.

My own observations would lead me to the deduction that the subconjunctival drainage was of greater import in the congestive (inflammatory) type. I have many cases under constant observation where this drainage is very evident. However, I am inclined to think that in the non-congestive (simplex) type, the intraocular channels may be of greater import. Here the anterior chamber is much deeper, the anterior peripheral synechia more uncommon, and the iris traction alone may be sufficient to reestablish the equilibrium between production and escape of the aqueous.

In view of these various opinions on this phase of the question, one may say that in a great many

cases drainage definitely takes place into the subconjunctival spaces and at the same time the widened spaces of Fontana are in all probability also utilized. In those cases where definite evidence of subconjunctival drainage is absent and the tension remains low, the iris angle is probably of greater import.

#### CHART I

##### *Iridotasis Operation for Glaucoma.*

##### *Classified as to age in this series.*

Under 2	Under 10	Under 20	Under 30	Under 40	Under 50
4	0	0	0	6	13
Under 60	Under 70	Under 80	Under 90	Total	
89	24	18	1	105	

##### *Extremes of Age.*

<i>Earliest Age</i>	<i>Oldest</i>	<i>Age Average for the Series.</i>
2 at 4 months	1—81	55.4
1 at 5 months		
1 at 14 months		

##### *Division by Sex*

<i>Female</i>	<i>Male</i>
40	65

#### CHART II

##### *Type of Glaucoma in which the Iridotasis Operation was used.*

Congenital (Buphthalmus) .....	4
Non-Congestive (Simplex) .....	27
Congestive (Inflammatory) .....	60
Secondary .....	7
Not classified .....	7
Total .....	105

#### CHART III

##### *Intraocular Pressure*

##### *Average, Before and After Operation.*

Type	Before	After
Congestive (Inflammatory) .....	51½	21
Non-congestive (Simplex) .....	40½	22½
Secondary .....	50½	22½
Not Classified .....	42½	19¾

#### CHART IV

##### *The Lowest and Highest Intraocular Pressure Before and After Operation.*

Type	Before Lowest	Before Highest	After Lowest	After Highest	Greatest Excursion
Congestive (Inflammatory) .....	33½	81(21)	7½(41)	37	60
Non-congestive (Simplex) .....	15*	77(33½)	7¼(27¼)	51½(54)	43½
Secondary .....	43	70(15)	15	30	50

\*In this case vision was good in right eye and nil in left, with cupping and perimetric contraction, but after use of adrenalin, tension went up in right eye.

The figures in brackets to the right indicate the intraocular pressure before or after operation in the individual case cited.

##### *Case Longest Under Observation.*

M. L. Iridectomy of left eye in 1911. Vision 20/65; last tension 38.

Iridotaxis of right eye March 28, 1918. Vision 20/25.2; last tension 18.

### Complications

		Results
Severe Hemorrhages.....	5	1 Enucl. (C. C.)
Lens Injured.....	3	1 Enucl. (E. E.)
Choroidal Hemorrhage.....	1	1 Enucl. (C. B.)
Could not prolapse iris.....	4	
Diabetics .....	4	1 bad (Mrs. B.)
Enucleations .....	3	All very bad eyes originally
Cases operated in presence of		Good
cataract .....	2	

*C. C.* Posterior synechia present, iris could not be drawn into incision and very severe hemorrhage followed from development of vessels on iris. This eye had a tension of 53, with absence of light perception and projection before operation. Later enucleated.

*E. E.* Lens capsule ruptured during operation. Tension remained up, wound bulged and later had to remove lens in a dirty field. Eye remained irritable for a long time, later enucleated. Light perception and projection absent prior to operation.

*C. B.* Eye had been injured twenty years ago. As keratome was withdrawn, aqueous escaped and eyeball collapsed followed by excruciating pain. Later enucleated (Choroidal hemorrhage).

*Mrs. B.* Result good for some time, later would not adhere to diet or permit blood chemistry for sugar content or injection of insulin.

In all the cases where enucleation was the final result, operation was advised for the relief of pain only and possibly saving the eyeball for the cosmetic effect. Hemorrhage as a rule is from the incised conjunctiva, and is of no serious import; when very severe it is usually from newly formed vessels on the anterior surface of the iris that can be seen before operation.

Inability to prolapse the iris is usually due to old posterior synechia which cannot be released (undue manipulation may result in rupture of the lens capsule) or an atrophic iris.

Diabetics are always a hazardous risk. *Cases in which tension was again elevated after operation* and had to be reoperated, of which we have record: 7.

In these cases the iris was again prolapsed at another point at the limbus.

### GENERAL SUMMARY

Relative to the results to be expected in the different types following the use of this operation—in the congestive or inflamamtory type, the results are brilliant, pain is relieved almost at once, and with it a rapid improvement of all the symptoms. The hospitalization period is much shorter and vision more rapidly restored.

In the non-congestive or simplex type the immediate results are naturally not so brilliant.

Most of the cases of this type that I have operated on have been in the very late stages. The history invariably elicited in these cases disclosed frequent change of glasses by an optometrist or a medicinal regime over a long period. Nerve fibres destroyed by the elevated intraocular pressure, be it constant or intermittent, cannot be expected to again function. In some cases vision later may even appear diminished and perimetric fields more contracted, but I am confident that in these cases many fibres that were still feebly functioning prior to the operation were beyond recovery and were eventually entirely destroyed.

In the congenital or buphthalmus type, my experience has been limited, and what I have had has not been brilliant. The great difficulty in retaining the prolapsed iris in the limbal wound is due to the very thin flaccid sclera. When successful the ballooning of the prolapsed iris is at times immense. I now aim to prolapse the iris at two different points through separate small incisions.

In the secondary type I have used this procedure seven times with very good results. Of course it is understood that no glaucoma operation should be attempted in this type of case unless imperative and all other efforts to treat the cause to reduce the pressure have failed.

104 S. Michigan Avenue.

### THE RELATION OF A STATE CHILD HYGIENE PROGRAM TO THE PRACTITIONER OF MEDICINE\*

GRACE S. WIGHTMAN, M. D.,

Chief, Division of Child Hygiene, State Department of Public Health

SPRINGFIELD, ILL.

The State Department of Public Health is a medical organization. Its staff is composed almost entirely of physicians secured from the ranks of the general profession of medicine.

In general, the purpose of the official health agency may be said to be the conservation and improvement of the health of the citizens of the state, in so far as the laws of the state make this possible. In all of its duties, a health agency must constantly make use of the knowledge which has come through centuries of patient toil,

\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Moline, June 2, 1927.



research, and observation in the field of medicine.

These statements are made to emphasize the fact that, while the viewpoints of a health officer and a private practitioner of medicine may be different as to methods and scope, they must be similar in objectives and achievements. We have had the same training, we share the same traditions and difficulties, and it is regrettable that even the least misunderstanding should have come about to delay the work which can be done only by these two branches of medicine working together.

The health officer has devoted his efforts toward education of the mass of the people in the prevention of disease, while the physician has been concerned with the care and cure of the sick individual. There have been, so far, two reasons: First, because the most needed measures for the conservation of public health could be brought about only by concerted official action, as in the sanitary supervision of milk, water, and food supplies, and law enforcement in the control of epidemics; second, because the most recent interest of the health officer has concerned the phases of personal hygiene and health habits of the individual. And herein lies the field of mutual interest.

One often hears it stated that the general practitioner is not trained to practice preventive medicine. If *he* is not, who is? From what profession may this service be had? True, he may not have been trained to think and act specifically in this field, but he is equipped to do so when through a changed attitude he becomes interested in preventive practice. The doctor has had a training in the fundamental natural sciences and is accustomed to think in terms of biology, chemistry, and physics. Our medical schools have taught us to think more about disease than about health, but practicing medicine makes the doctor the most adaptable person in the world. When he is persuaded of its desirability, he will only need to enlarge his viewpoint to include preventive medicine.

This newer branch of medicine—public health—owes all its scientific information, upon which its methods are built, to the researches of the medical profession. It is to the study, diagnosis, and reports of cases from the men in general practice that health officers owe the knowl-

edge of the occurrence, nature, and prevalence of the diseases which they attempt to combat and control.

Public health agencies have failed, either through lack of appreciation of the field or through indifferent methods, to utilize the great force represented by the medical profession. The official agency is beginning definitely to be conscious of its limitations for accomplishment. It is beginning to recognize the vast potential force of the practicing physicians in preventive medicine, and to realize that all physicians are a part of a community health program. The family doctor can not be left out. First to last, he is a preventive agent. The general routine of good practice finds him concerned with the hygienic regime, health habits, home conditions, and best use of the available equipment for the cure of his patients. With a little change of attitude, a slight adaptation of methods, this well equipped profession could turn its interest and vast force into the field of preventive medicine with immeasurable benefit to the public, with more satisfaction in the kind of service rendered, with greater remunerative fields in which an ever increasing number of people are going to demand help. It is here that the health agency finds its work of creating the demand for preventive work. The physician's part is to respond.

It is in the field of child hygiene work that I shall speak more specifically of the interlocking interests of an official agency and the practicing profession.

In our educational work through lectures, literature and demonstrations, we try to teach women that the expectant mother should have pre-natal care, that she should place herself under the supervision of a physician as soon as she suspects pregnancy. And in order to have her understand why this is desirable for her health and that of her baby, some explanation of routine pre-natal care is made to her. When she goes to her physician, what is his response? Does he encourage medical supervision and carry out even the minimum routine of pre-natal care? My knowledge of this question in Illinois would lead me to believe that the greater number of physicians in general practice are not active in this field of preventive medicine. But it is not be-

cause they are not professionally equipped to be so.

How many county medical societies have studied their maternal and infant welfare problems with a consideration of what the obligations and opportunities of the profession might be? We teach mothers that they should keep their babies under the doctor's care during the first year of life. Who can deny that a young, rapidly-growing organism, exposed to all the hazards which the human infant may meet, does not constitute "a case" worthy of the most scientific supervision? We tell the mother that the physician will wish to weigh the baby, will instruct her about nursing, will tell her when to give new foods, cod-liver oil, how to sun-bathe, etc., etc.

How does the medical profession in Illinois respond to this phase of child health work? The hundreds of letters which come to us from mothers say, "The doctor says my baby is all right. He doesn't need to see him any more unless he is sick." Then follows a line of questions as to when to give different foods, about average weight for age, about sleep, about age for walking, etc. All this advice the mother should have had from the doctor and should have paid for it.

At the same time that physicians are giving this education in preventive practice they are establishing an intelligent confidence, a reliance on the part of the public in the profession. Nothing could do more to teach the public to go early to the doctor, to enable him to receive cases at a time when treatment measures will be effective, thus preventing the development of a following for the quacks and cultists.

We teach that children should be vaccinated at weaning time against smallpox and diphtheria. One hundred twenty-five thousand babies are born in Illinois every year. What per cent. receive this attention from their doctors? Less than one per cent., if we may judge from estimates based on the 10,000 babies examined every year in our baby conferences. In spite of all the educational work that has been done by health agencies for many years there is a great unvaccinated population in Illinois. It would seem that health officers had expended a maximum of effort and achieved a disappointing result. It remains for the physician in practice to vaccinate

his child patients before we are protected against smallpox.

The same holds true of diphtheria and perhaps of scarlet fever. And why the baby conference? Health agencies have sponsored them for fifteen or twenty years for the purpose of educating mothers to the value of medical supervision of infants. Why does not the doctor so care for and satisfy his patients that they will not take their infants to these crowded, hurried baby conferences? The same is true of the pre-school child conference, the so-called "Summer Round-Up" to prepare children to enter school. Why should these little patients have to be brought together in groups to meet strange doctors for a medical examination? Why can they not receive this attention as individuals from their family doctors, who should know them well as to heredity, habits, care, etc. Why must the great majority of cases of diseased tonsils and adenoids, eye and ear defects and malnutrition go undiscovered and receive no treatment until revealed by school inspection?

One often hears the statement that people will not pay a doctor to keep them well. Is not this a question of education? Are there not numbers of physicians, especially in the branch of pediatrics, who have large practices in preventive work? It is in his obstetrical and pediatric practice that a doctor can best begin to practice preventive methods. A mother who has received pre-natal care, who has had her baby under medical supervision during its first year of life, will continue to demand a service for herself and her family that assures her the health, proper growth, and development of her children.

There is the question of why the physician should be interested in preventive medicine. *First*, it is the greatest field for service to humanity. Can we compare the service of preventing a child from having diphtheria with that of treating the case? When definite means of prevention are known, does not a new obligation fall upon the doctor? *Second*, a richly remunerative field is open to the physician. Compare the vaccination of 125,000 children against diphtheria to the treatment of 4,000 cases. Has a false sense of delicacy, a false interpretation of ethics prevented doctors from doing the educational work which would create a demand for their services in the prevention of diseases?



*Third*, the signs of the times all point to an increasing demand for protective advice from the doctor. Again we point to the development of the baby conference, the well baby clinic, the pre-school child examination, the medical supervision of school children, the floods of health literature disseminated through the daily papers, popular magazines, official and unofficial agencies. All of these are creating a demand for a different type of service from physicians and the time is not far distant when physicians in general practice will do the greater part of the health work of a community and will be held morally and legally responsible for health conditions. Of course, questions which can be dealt with only by sanitary laws, will remain in the charge of official health agencies.

Some of our medical schools are now offering courses in preventive medicine and there is much discussion by other schools as to whether the subject should be taught in a separate department or as a part of general medicine, pediatrics and obstetrics. Opportunities are being sought for field work with the health agencies for students in order to give them the preventive and public health viewpoint. Dr. Veeder, professor of clinical pediatrics at Washington University, St Louis, reports that he is having a great demand from physicians for short, extensive post-graduate courses in preventive pediatrics. Harvard, Stanford, Georgetown, Columbia, and the University of Virginia make similar reports.

Physicians are equipping themselves to meet a public demand for this service. I wish to quote from Dr. W. F. Draper, Chairman of the Section on Preventive Medicine, at the recent meeting of the American Medical Association in Washington, D. C.:

It would be a fair question to ask in just what ways the practicing physician can contribute more to the prevention of disease than he is doing at present. It is believed that ways would become sufficiently apparent if the mental attitude were changed to include the idea. A few illustrations will show some of the procedures which readily occur. One of the first and easiest steps would be the full carrying out of one of the oldest tenets of medicine, which is to treat the patient rather than the disease. This presupposes a thorough examination of the patient and the discovery of any incipient disease or predisposition which he may have in addition to, or associated with, the particular complaint which brings him to the doctor. This examination should include not only

the physical body, but the whole man—his habits and his mental worries and how he deals with them. It is not to be supposed that every doctor will be a competent psychiatrist, nevertheless present day training should be sufficient, taken in conjunction with the intimate relation of confidence which should exist between doctor and patient, to lay the basis for some very effective work in mental hygiene. Thus far we have considered what may be done in the office and with office patients. When the doctor visits a family an immense field of preventive medicine becomes opened to his productive cultivation.

It is our impression that the old-fashioned family doctor knew far more about his families and their members as regards both their physical condition and their mental comfort than is the case nowadays. Undoubtedly an enlightened return to this more intimate relationship would be better for the public and also, as we think, for the doctor.

Dr. Draper suggests:

The Public Health Service has felt so strongly that an immense power for good was not being adequately utilized, that it is very desirous of helping along a process of evolution which although much hindered and delayed appears to be ultimately inevitable. It has considered whether the publication of a "Check List of Opportunities for Domestic Health Practice" would be acceptable to the profession and in any considerable demand by it. It would seem possible with suitable counsel to prepare such a list which should be convenient for reference by doctors desirous of developing this branch of medical activity.

In closing, I wish to report that the Educational Committee of the Illinois State Medical Society is at present engaged in working out plans with the State Division of Child Hygiene which, we believe, will be of far-reaching influence in enlisting the interest and activity of the general medical profession of this state in the preventive aspects of Child Health work. Literature is being prepared, lectures, and clinic courses in pediatrics and obstetrics are contemplated for county medical societies. These are to be given at local hospitals throughout the state. Plans are being made for the promotion, through the county medical society, of pre-natal care and of breast-feeding of infants, and for a closer link-up between county medical and dental groups with the women's clubs and parent-teacher groups.

#### DISCUSSION

Dr. Orville Barbour, Peoria: I wish to compliment the essayist on the splendid presentation of a very timely subject. She has covered the subject so thoroughly that there is hardly anything more to be said. There is no question, however, that the morbidity and mortality of childhood would be greatly reduced

if each child could have access to the benefits of preventive therapy. If this ideal situation could be attained, it would add very much not only to the physical and mental health but also to the material prosperity of every community. The economic saving alone which would result from such a condition would be of immeasurable value. This is a point, I think, that is well worth stressing when discussing this subject with the laity. Sometimes they can not see the health benefits to be derived from such measures as these but they can see them if one points out that it affects their pocket book.

There now exists undoubtedly a demand among an increasing number of people for medical supervision and medical instruction in the care of their children, and it is up to the physician to meet this demand. There is not only a demand for medical supervision and medical instruction, but they seem to have learned to demand correct information and good sound advice, and they seek it until they find a physician who is competent to render such service. For that reason I think it is well worth while for all physicians or all medical men to equip themselves to the best of their ability to meet this demand from parents or else they will be discouraged in the efforts they are now after in not attaining preventive therapy for their children.

I do not think I can add anything to the essayist's paper except that I would like to emphasize the fact that I do think it is up to the physician of each community to get behind this movement and also to be leaders in the efforts to attain universal preventive therapy among the children of each community.

Dr. Lloyd Arnold, Chicago: There is only one phase of Dr. Wightman's paper I wish to discuss; that is, the teaching of medical students and the training of medical people in the idea of prevention. That subject cannot be given as a course in preventive medicine. There is no place in the curriculum for such a course. One cannot consider typhoid fever in its prevention without considering typhoid fever as a whole. It must be a viewpoint of the teacher; that viewpoint of the teacher should be the viewpoint of the clinical teacher. After all, unless it is definitely connected with the particular disease as that disease is treated in the clinic, the outdoor clinic, in the hospital or at the sickbed, unless the medical man considers typhoid fever in its treatment and diagnosis, unless he considers prevention as just one-third of the picture, at least, we will never get the idea of preventive medicine over to the medical student.

This is a rather new idea when we speak in terms of medical curriculum. Those of us in medical education sweat with the curriculum most every spring as to what we are going to do with it, how we are going to change it, and we usually leave it alone after so much debate about it. The idea of prevention, I think, is discussed in every medical school in the curriculum committee meetings every time it meets, and the idea that is most prevalent in the minds of medical educators is that the idea of preventive medicine must be infiltrated into each par-

ticular course in the curriculum, as there is hardly a place for such a course as an individual entity.

Our greatest difficulty is that most of our teachers were trained at a time when the preventive idea was not a part of the curriculum. It is hard to get them to change their viewpoint. It is harder to get them to change their viewpoint and give preventive medicine its proper place in their teaching than it is to influence the medical student. So the greatest difficulty comes from the lack of the clinical faculty comprehending the part that preventive medicine plays in the training of the medical student, and I don't think it will come about until we get the viewpoint of the clinician.

Particularly, about child hygiene, I think that is probably treated best in the medical school from the preventive standpoint than any other one subject, probably also prenatal care and child hygiene, because most of the men in these fields are familiar with the work that is being done by the public health agencies and the private agencies, and this particular part of preventive medicine is emphasized probably more than some of the more general phases of preventive medicine.

Dr. Frank L. Rector, Chicago: I would call Dr. Arnold's attention to the fact that this question is very satisfactorily handled in the Vanderbilt University at Nashville, Tennessee, under Dr. Leathers. The work on preventive medicine is correlated with teaching of surgery, bacteriology, hygiene, pediatrics, tuberculosis and similar studies. For example, if a case of malaria is under consideration in the department of medicine, Dr. Leathers sits in, so to speak, with the professor when the subject is being discussed and gives the public health and preventive aspects of the subjects. The whole question of malaria, its transmission and control is tied in with the clinical side. The same methods with tuberculosis, the same with obstetrics and other subjects with a public health phase. So that I think the time has passed when we need to apologize for the fact that preventive medicine is not being taught and cannot be taught because it is being taught today in a most effective manner.

Dr. J. S. Templeton, Pinckneyville: I am a general practitioner. But the question arises as to the relation of the State child hygiene program to the practitioner of medicine. That is almost answered, it seems to me, in one word, and that is, education. The last two speakers referred to the education of the student. That is all right, but I don't think really any extra care is required along that line. I believe our educational institutions are educating the students as to the prevention of diseases and child hygiene. There's a world full of old practitioners, I am sorry to say, and some of them need a little educating, but the general public needs it more.

Since I came here and heard Dr. Wightman's paper, which was ably presented, I just went back about ten weeks when an educated gentleman, one of the brightest in our community, had a sister-in-law take down with scarlet fever. We immediately ad-



vised vaccination. He took it under advisement. I think I stand as close to that man as the average practitioner does to any of his patients. I never could get him to let me vaccinate his family of three small children and his young wife. What was the result? I explained to him that they might be quarantined for ten weeks or longer. One after another took down with scarlet fever. He objected; he said no, that's something new, that he was going to take a chance, and he took chances all right. He was quarantined from the home, I think about ten weeks, and they just freed him a few days ago. Now, there's the trouble with the average practitioner.

Another case comes to my mind in the neighborhood recently. I had a case of typhoid fever. A mother from a home near by went in and helped wait on the patient. I vaccinated everybody in the home. I thought I was doing a good clean job, but this mother evidently carried the typhoid fever from that patient to her home and gave it to her daughter.

Now, you see so many things come up. I like pediatrics. While I don't specialize in that line—I am not living in a town where I could—I do believe that this is coming along all right. The millenium is not here. It is not coming tomorrow. But the question of a State child hygiene program is evidently one of education. I don't think there is any other way for us. We must educate the public and, as I said, some of our physicians.

Dr. H. V. Gould, chairman, Chicago: Dr. Templeton is correct. If you would spend some time and send out literature and have speakers at county medical society meetings and get across to the physicians in the community just what you are trying to do, it would do a great deal of good. You must remember that preventive medicine has advanced during the last ten, fifteen or twenty years, and we should try to bring the whole community up to our standard or hoped-for standard. In that way you will get cooperation. The physicians of the community should know exactly what you are trying to do; not only that but know how to do it. There is no man on earth more anxious to serve his community than the community physician.

#### FOUR COMMON MISAPPREHENSIONS REGARDING THE ENDOCRINES AND ENDOCRINOLOGISTS\*

JAMES H. HUTTON, M. D.,  
CHICAGO

I. That endocrine disorders are strange, rare and peculiar conditions.

II. That our knowledge regarding their physiology and the pathology and symptomatology of their disorders is so meager that a diag-

nosis can be made only in the severe or far advanced cases.

III. That even after a diagnosis is made endocrine therapy is of no value.

IV. That men interested in this phase of medicine are prone to overlook pathology in other parts of the body in their search for endocrine disturbances and that symptoms are apt to be erroneously interpreted as due to endocrine disorders.

*Regarding Misapprehension No. 1.* Consider that there are roughly twelve of these glands. Life cannot be maintained without the pituitary, or the adrenals, or the pancreas, and probably not without *some* parathyroid tissue. The thyroid is necessary to a normal life and with a considerable reduction in the output of its hormone we decline proportionately in our intelligence and physical capacity. Without the gonads we are little better than vegetative organisms.

Without the proper function of these glands our bodies and brains fail to develop and function normally. If these structures are of such great importance to our body economy does it not seem logical to suppose that some of them should occasionally fail to perform its work properly and that symptoms should arise as a result of this?

Think of the enormous number of goiters in the United States, and cases of hypothyroidism are more numerous than goiter.

Perhaps few men think of diabetes mellitus as an endocrine disorder but it is, being due, in part at least, to a shortage of the internal secretion of the pancreas. There are thought to be about 500,000 diabetics in the U. S.

If these two glands alone furnish examples of how plentiful are endocrine disturbances, think how many the other glands must add to this number. How many ovarian disturbances are seen at puberty and the menopause, not to mention cases of menstrual disorders due to ovarian dysfunction!

*Regarding Misapprehension No. 2.* There is no difficulty in recognizing the goiter that sticks out like a sore thumb. Exophthalmic goiter is recognized when the cardinal signs and symptoms are present, albeit this is usually a late stage and recognition should occur earlier. The opposite condition of hypothyroidism is rarely recognized except when it is of such a severe de-

\*Read before the Section on Medicine, Illinois State Medical Society, Moline, May 31, 1927.

gree as to cause myxedema. Even then the condition is so seldom recognized that it is common for these patients to consult a number of doctors before correct diagnosis is made. Yet there is hardly any condition admitting of such easy and positive diagnosis if a man cares to familiarize himself with its signs and symptoms.

Addison's disease is a rare affair. It is also a terminal affair. We should be on the lookout for these same symptoms in milder form as an evidence of functional hypoadrenia.

Ovarian disorders, especially the deficiencies, should be recognized from the history and the symptomatology. Little laboratory work is needed. A careful history and physical examination will usually suffice to make the diagnosis if one is familiar with the available facts regarding the functions of these organs.

Parathyroid disorders, at least the deficiencies, are recognized by the symptoms of tetany and a low blood calcium. It is probable that they are concerned in many ulcerative states and in some cases of hay fever and asthma. Their recognition is more difficult and uncertain but enough facts are available to make us think of and look for disorders of these glands.

*Regarding Misapprehension No. 3.* Few men would argue that endocrine therapy is of no avail in myxedema. Cretinism furnishes another example of the value of thyroid medication provided it is begun in early life. It is of greater value in milder degrees of hypothyroidism.

Most of us are familiar with the relief of distressing symptoms of the menopause by ovarian therapy. Results of the treatment of ovarian disorders occurring at puberty are even more satisfactory. The functional amenorrheas also yield brilliant results.

The endocrine treatment of Addison's disease yields better results than any other form of treatment but these are comparable in no way with the results to be obtained in the treatment of functional hypoadrenia that follow "flu" or other acute infections.

Insulin is the greatest aid we have ever had in the treatment of severe diabetes.

Endocrine therapy differs from no other, either medical or surgical, in that results are good in proportion to the earliness with which the condition is recognized and the promptness

and thoroughness with which treatment is initiated and carried out. Most critics of endocrine therapy overlook the fact that it is specific medication! One can no more cure a pituitary deficiency by giving the patient gonad than he can cure lues by giving the patient quinine!

*Regarding Misapprehension No. 4.* The man who attempts endocrine diagnosis and therapy must of necessity pay particular attention to the body as a whole and be as nearly certain as possible that the patient's complaints are due to endocrine dysfunction before he uses endocrine products.

In no other field of medicine or surgery is an accurate and detailed history of greater value than in the study of endocrine disturbances. Years ago the immortal John B. Murphy said to a student, "Let the patient tell the story and he will tell you what his trouble is." That is particularly applicable in the field of endocrine disorders. The well trained endocrinologist knows that it is a waste of time to hazard a guess that the patient's abdominal distress is due to ovarian insufficiency and to undertake treatment along that line when the trouble may be a chronic appendix, just as much as it is a waste of the patient's time and money to remove the appendix when the trouble may be due to ovarian insufficiency. Don't overlook the fact that useless surgery of this particular brand is of much more frequent occurrence than is useless endocrine therapy. Endocrine therapy holds no parallel to mistaken surgical diagnosis. The most enthusiastic endocrinologist is probably less of a menace to society than is the enthusiastic surgeon. Certainly he is less apt to do irreparable damage. Every branch of medicine and surgery should follow DeLee's admonition "let us first do no harm."

The endocrinologist is on trial before the profession and he must use not only the precautions that every conscientious doctor uses in making a diagnosis and advising his patient, but additional precautions to make sure that none of his colleagues find him "in error." At the present time more stigma attaches to a mistaken diagnosis in endocrine disorders than in any other field of medicine.

The endocrinologist must be just as certain as facts will allow before he makes a diagnosis of endocrine disorder and he must be sure that



treatment of an endocrine nature, if undertaken or advised, is either the only treatment indicated or is specifically labelled as being the treatment of the complications or sequelae of some more common condition or syndrome.

### INTRAOCCULAR HYPERTENSION RELIEVED BY THE REMOVAL OF FOCAL AND SYSTEMIC INFECTIONS\*

C. W. GEIGER, M. D., AND J. H. ROTH, M. D.,  
KANKAKEE, ILLINOIS

We intentionally omit any review of the etiology, pathology and symptomology of glaucoma. This has been discussed in detail by our most widely accepted authorities. It is commonly agreed that the situation which confronts the ophthalmologist in very many of his glaucoma cases is so desperate that any measure of relief that can be offered, even the slightest addition to our means of treatment is gladly welcomed. We do not propose anything new; we only wish to call your attention to an important feature that may sometimes be overlooked.

We do not wish to enter into any discussion of the relative merits of the operative and the non-operative procedures in the treatment of glaucoma. Both methods have often enough met with disappointment both for the patient and the ophthalmologist. We have been open minded and have been impartial to both methods of treatment. When the medical treatment failed as was shown by sustained or only moderately reduced tension, decrease in the perimetric fields and reduced vision we resorted to surgery, which latter procedure did not always meet with success. Formerly at times when we had exhausted almost every means recommended by the authorities we began in desperation to ferret out infections and in a large majority of cases found the object of our search, it may have been focal or systemic, but we usually found some evidence. Then we began to reverse the order of our search looking for the infection early while we were carrying on our medical treatment. In this we were rewarded, but the elimination of the infection alone did not always give us the desired results. Here we may question the cooperation that was had from our consultants. All physi-

cians are surprised after repeated and exhaustive examination to stumble on some small foci of infection that had previously escaped their notice.

At this point we wish to take exception to the attitude of the average dentist and this is the type of dentist with whom we must most frequently consult. His aim is the conservation of every tooth that is solid enough to sustain a mechanical repair. Whereas the ophthalmologist is constantly endeavoring to have the patient rid himself of the slightest foci of infection. It is only upon insistence due to radiographic findings that the dentist will shift responsibility and remove the offending factor. Again our general consultants may miss obscure conditions, whose elimination might prove of inestimable value to the patient and the ophthalmologist.

We do not propose to contend that systemic or focal infection may or does play a very important role in the production of glaucoma. But as long as we are in doubt as to the etiology of glaucoma it is one of the elements that is deserving of consideration. Lagrange<sup>1</sup> maintains that hypertension in an eye denotes a sick eye in a sick body. Risley<sup>2</sup> says that glaucoma in a disease coming on at an age when wear and tear, harassing vicissitudes, misfortunes, exposure, overwork and vicious living have sapped the physiological foundations of life, when infections have found entrance to the structures of the organism through the doorway of the epithelium and when a variety of toxic, auto-toxic and other influences have set up vascular and cardio-vascular diseases, associated nephritis, uveitis, high blood pressure, etc. Glaucoma in fact rarely occurs in an individual in good general health.

Magitot and Baillart<sup>3</sup> do not believe that the hypertension is due to sclerosis of the angle. They do not agree that the ocular precedes the venous hypertony but that the reverse is true. They try to establish the fact that a previous inflammation is present in the veins of the eyes. We believe that the most logical course of such an inflammation would be some sort of infection either directly or distantly associated with the eye. Malling<sup>4</sup> claims that many cases diagnosed as primary glaucoma are really secondary to changes in the uveal coat and more especially the ciliary body.

In the mechanism of preglaucomatous conditions Gradle<sup>5</sup> suggests. 1. Anatomical predispo-

\*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Moline, June 1, 1927.

sition. 2. An accidental lack of tone in the vasomotor sympathetic nerve fibres between the cavernous plexus and the eye. 3. Repletion with blood of the cavernous spaces of the eyeball. 4. A rise in the systemic blood pressure as a result of an emotional crisis or other causes. 5. Increased transudate into the vitreous. 6. Pushing forward of the diaphragm of the eye and closure of the filtration angle.

Pesme<sup>6</sup> in a slit lamp study of the iris in the early stages of glaucoma found atrophy of the iris from the first. But more important was a cloud of fine brownish pigment which was deposited on the under surface of the cornea and the anterior surface of the lens. This dust like pigment was vastly different from that found in iritis. There was a fresh shower of this pigment with each rise in tension. However, he did not venture an opinion as to the probable cause of this pigment.

Thomas<sup>7</sup> reported two patients in whom hypertension was relieved by the removal of focal infection and appropriate medical measures. He believes that many cases of glaucoma can be avoided by attention to focal infection.

Arnoux<sup>8</sup> finds that primary glaucoma coexists with syphilis although he hesitates to say that it may be a direct manifestation of the disease. Charlin<sup>9</sup> in a study of 100 patients as regards the connection between glaucoma and changes in the vascular tissues, found 90% showed changes in the heart and vascular tissues. He is of the opinion that 60% of the cases in his series showed definite or probable syphilitic manifestations. He concludes that glaucoma is based on diseases of the vascular tissues of the eye. Although there is no constant connection between increase of intraocular tension and increase in the blood pressure he believes that 90% of glaucomatous patients are systemically diseased. Carlotti<sup>10</sup> emphasizes the necessity of exact history taking, serological tests and above all examination of the cardiovascular system. He reported eight cases of glaucoma definitely syphilitic.

Many conservative men prefer to follow their patients, especially the very elderly, by instillation of miotics and internal medication. Often after an operation in which the tension is lowered to normal limits we find the fields and vision gradually fail until total blindness ulti-

mately results. Perhaps the tension was responsible for the initial loss of vision, but with the ocular contents subjected to sustained insult, even though the tension is lowered, the tissues of the eye are left in such a depleted condition that they more easily fall prey to the attacks of toxins from local and general infections. Many times a searching examination for focal and systemic infections may produce delightful results.

#### Report of cases.

Case 1. M. E. K.; female; aged 36; single.

May 11, 1918. Last night noticed that her left eye watered and at 4:00 a. m. was awakened by severe pains, feeling of pressure and marked loss of vision. Examination shows pupil dilated; pericorneal vessels injected. Lachrymation, photophobia and increased tension. Diagnosis acute inflammatory glaucoma. Details of the fundus obscured.

Vision: R. 15/30; L. 15/200. Rx, eserine.

May 12. Eye better, tension better.

May 13. Left eye redder; tension 53; vision 5/200. Attempted iridectomy under local anesthetic but iris retracted too far upward and had to be satisfied with evacuation of anterior chamber contents.

May 16. Right eye red, lachrymation, pain, tension 63. Consultation. Iridectomy of right eye, local anesthetic, urine-albumin.

May 17. Tension both eyes better.

May 20. Tension of right eye up. Paracentesis of right eye and evacuation of bloody fluid.

May 21. Tension of right eye much better.

May 29. Tension of left eye up, lens swelling. Paracentesis of anterior chamber.

May 31. Left lens removed.

June 17. Left hospital. Can open eyes and look around. Most of capsule absorbed. Redness gone.

July 8. Eyes much better; right 6/120.

August 7. R. 15/200; L. 2/200.

September 13. Tension, R. and L. 42. Had tonsillitis one week ago and eyes have been worse since. Coagulation time 7 minutes. Rx. Calcium lactate.

September 14. Tonsillectomy, ether anesthetic.

September 16. Tension, R. 42; L. 53.

September 19. Tension, R. 47; L. 59. Eserine six times daily instead of 3 times.

September 22. Tension, R. 44; L. 56.

September 29. Tension, R. 34; L. 44.

October 6. Tension, R. 20; L. 28. Vision, R. 15/200; L. 2/200.

October 29. Tension, R. 37; L. 35.

November 5. Eserine conjunctivitis. Rx. Pilocarpine. Had molar which showed apical abscess, removed.

December 12. Eye much better since tooth has been removed. Tension normal. Vision, R. 15/200; L. 2/120.

March 11, 1919. R. 15/120; —2.50; 15/80. L. 2/120 plus 10.00; 15/200, tension normal.



April 13, 1920. R. 15/80 plus 1.75; 15/60, tension normal.

July 21. R. 15/120 plus 3.50 axis 45; 15/20, tension normal.

July 31, 1925. R. plus 3.00 axis 45; 15/20, tension normal. L. fingers one foot.

Case 2. I. G. K.; age 50; male; farmer; married, several healthy children.

May 18, 1920. Was struck in left eye 26 years ago and has had no vision in that eye since. Vision has been getting hazy in right eye past two months. No particular pain. Had glasses fitted in another office one month ago. Vision, R. 15/10<sup>-3</sup>; L. no pc or pj. Left eye leucomatous with an anterior staphyloma. The tension of the left eye was stony hard but the tension with the tonometer was unsatisfactory on account of the uneven cornea. Tension of the right eye was 52. Field typically contracted. Teeth and tonsils in very poor condition. Physical examination and attention to the teeth advised and eserine prescribed.

May 25. Has had teeth all removed and vision seems better. Tension, R. 35.

June 3. Tension, R. 34. Vision, 15/10<sup>-3</sup>.

June 12. Tension by palpation seems better. Vision same.

June 22. Tension, R. 44.

July 3. Tension, R. 43. Eserine conjunctivitis. Rx. pilocarpin.

July 12. Patient is not ready to consent to any operative procedure on the eye but did consent to a tonsillectomy. Tonsils removed under ether anesthetic.

July 19. Tension, 42.

July 28. Tension, 37.

August 11. Tension, 37; vision 15/10<sup>-3</sup>.

August 24. Tension, 49.

August 31. Tension, 44.

September 18. Tension, 48. Consultation and operation insisted upon.

September 25. Iridectomy right, local anesthetic.

October 9. Vision, 15/30, marked atrophy. Tension, 35.

October 20. Vision 15/60 —1.00 axis 120, 15/30, tension 33.

November 3. Vision corrected 15/40; tension 26.

November 10. Vision 15/60 —1.00 axis 120, 15/30, tension 14.

November 30. Vision 15/30 —1.00 axis 150, 15/20, tension 33.

January 24, 1921. At this time a positive Wassermann was obtained and the patient referred to the family physician for treatment. The instillation of pilocarpine was insisted upon.

April 12, 1921. The left eye, which had been very hard all along, had become irritated and red. It appeared as if the staphyloma threatened to break down and enucleation was advised, which was acceptable to the patient. Enucleation left eye.

April 30, 1921. Tension right eye 20. Vision 15/30 —.75 axis 120 15/20.

November 29, 1921. Vision corrected 15/20, tension normal, field contracted.

June 12, 1922. Vision corrected 15/20, tension normal.

June 3, 1926. Patient had been seen at various times with negative findings. Vision 15/40 —.75 plus 1.25 axis 45, 15/20. Tension normal and the field about the same as it has been since 1922.

Case 3. O. A. B., aged 51; female; housewife.

July 1, 1926. Has worn her present correction past 6 years. Past month her eyes have felt as if they were too large and full. Slight headache but no especial pain. Slight blurring at times, especially with close application. She was wearing plus .50 plus .50 axis 180 in each eye. Vision, R. 15/30 plus 1.00 plus .50 axis 180, 15/15. Left eye 15/30 plus 1.00 plus .50 axis 180, 15/15 with plus 2.50 added. There was a slight tortuosity of the scleral vessels. A slight cupping or rather a clearer definition of the scleral rim than normal. Anterior chamber shallow and a crowding forward of diaphragm of the eye. Fields markedly contracted. Tension R. 44, L. 34. Teeth in very poor condition and patient admitted that her health had been poor for several months. She was given eserine to use in the eyes and sent to her family physician for a thorough physical examination.

July 8. Corrected vision 15/15 in each eye. Tension, R. 25, L. 24. Has had all teeth removed and is under treatment for cardio-vascular condition.

July 22. Tension, R. 26; L. 28.

August 3. Corrected vision, R. 15/15 plus 4. Left eye 15/10<sup>-4</sup> Tension R. and L. 24. She had developed an eserine conjunctivitis so was given pilocarpine to instill in the eyes.

August 25. Vision corrected R. 15/10<sup>-3</sup>, L. 15/10. Fields much better. Tension, R. and L. 24. She continued under observation at regular intervals, the instillation of pilocarpine being gradually reduced until it was discontinued entirely in October.

December 15. Tension, R. 30, L. 29. A month previously had what her physician called the flu. There was a corresponding increase of blood pressure. The vision corrected was R. and L. 15/15. Fields about the same. Pilocarpine was given her again for daily use.

January 4, 1927. Tension, R. and L. 24. Vision and fields the same. Tension has continued lowered since and at present she is only using pilocarpine once daily.

Case 4. M. S., aged 66; female; single.

This patient was first seen at our office in 1915. Her vision at that time, R. 15/15<sup>-3</sup> plus .50 axis 135 15/10<sup>-3</sup>. L. 15/15 plus .50 axis 60 15/10<sup>-3</sup>. She was seen at various times with findings negative except slight refractive changes.

August 4, 1926. At this date she complained of difficulty with close application and dull aching of the right eye. Vision, R. 15/30 plus .25 plus .50 axis 135 15/15. L. 15/15<sup>-1</sup> plus .25 plus .50 axis 60 15/15 add plus 2.50. The disks were pale, the sclera rims were sharply defined. However, there was no cupping. The right field was markedly and typically contracted and

the left field suspicious. Tension, R. 31, L. 29. She was advised to have her family physician give her a thorough physical examination and also have her dentist give her teeth attention. She was given pilocarpine to instill in her eyes.

September 16, 1926. She had been instructed to return for observation in a week but did not return until this date. In the meantime she had a few remaining teeth removed and physical condition under observation. Tension, R. 19, L. 17. Vision same.

October 21. Eyes seem much better and she feels better physically. Vision corrected 15/15 each eye. Tension, R. and L. 19. She was allowed to reduce the number of instillations of pilocarpine until December 14,—she had not used any medication in the eyes for two weeks. Vision corrected, R. and L. 15/15. Tension, R. 16, L. 18. Fields increased.

March 4, 1927. Vision corrected 15/15 each eye. Tension normal. Fields fair. Has used no pilocarpine since December.

#### Comment.

In the first case the question of diagnosis may be raised. However, if we are to accept the premise that hypertension is an essential characteristic of glaucoma the average clinician would be more anxious to lean toward glaucoma than cyclitis with tension. However, the age of the patient and the influence that the infection had on the progress of the disease are factors suggestive of cyclitis.

That we had a cataractous lens two weeks after the onset of the disease in the first eye, seems to point toward a cyclitic complication. Of course we must admit the possibility of injury to the lens at the attempted iridectomy. On the other hand ruling out injury to the lens the pressure of the hypertony need not be entirely responsible for the lens swelling. Changes in the character of the nutrient fluid may produce changes in the lens substance.

The fact that the iris was retracted into the angle to such a degree as to render iridectomy impossible may draw censure from some operators and they will contend that the incision was not far enough back in the chamber angle. Also had the iridectomy been performed at this time the chances are that a stump would have been left and the purpose of the operation defeated. Today we are coming more and more to operate on such acutely inflamed eyes under general anesthetic. Gas anesthesia or ethylene is a convenient method and more comfortable for the patient. In many instances we get an extreme dilation of the pupil due to cocaine adrenalin anesthesia.

The flare up of the tension following an acute tonsillitis and the final subsiding of tension after the removal of what seemed to be the offending factor suggests that infection may have an important bearing at least on the course of the disease.

In the second case the lues seemed to be the important element. As the complications of syphilis are frequently found and they may simulate almost every condition possible, it should not cause any surprise that we find it either accompanying or complicating glaucoma.

In the other two cases the early suspicion of glaucoma and the presence of both systemic and focal infection speaks more forcibly for the education of the public in seeking early relief for loss of vision. In these patients and especially those past fifty routine fields and tensions should not be neglected. Palpation of the eyeball is a technique that can be perfected to a high degree, but must be practiced frequently. We believe that the neglect of fields and tensions is the cause of many cases of glaucoma running their unsuspected course, until tension typically reduced fields and loss of vision makes the diagnosis unmistakable but not until considerable ocular insult has occurred.

#### Conclusions.

1. Focal infection may be a factor in the production of both acute and chronic simple glaucoma.
2. The elimination of focal and systemic infection may affect the progress of the disease.
3. Attention to the general condition of the patient following apparently successful operation may be an important factor in preventing post operative atrophy.
4. Early attention to focal and systemic infection may prevent later glaucomatous grief.

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#### DISCUSSION

Dr. C. B. Welton, Peoria: The subject of Dr. Roth's paper is interesting to me because about two months ago I saw a young man, about 21 years of



age, who came to me in the prodromal stage of glaucoma in the right eye, the second attack he had had. The pupil was dilated, no change in the disc, the eye had considerable injection, there was no excavation, no change in the vessels, but a distinct tension of +1 degree. After examining the eye, I found the vision was 20/20. There was concentric contraction of the fields of vision for form and color. I sent him to an internist who made a complete examination. Wassermann was negative, no blood pressure findings, absolutely nothing except some casts and a little albumin. He had bad tonsils, a history of tonsillitis and general debility, and I advised an operation not only on the eye, but advised that he had his tonsils out. This I wanted him to do first. To my surprise the tension immediately came down after the tonsils were out, the eye cleared up and that was about six weeks ago. When the program for the society meeting came out I noticed the title of Dr. Roth's paper. This was the first paper of the kind I had seen where glaucoma had been relieved by the removal of foci of infection. I think there is something to this, and I firmly believe this young man's condition is relieved. The tension has remained down.

Dr. O. B. Nugent, Chicago: This paper of Dr. Roth's reminds us that we have found of recent years so many diseases, whose etiology can be laid to the door of focal infections, that he is possibly very nearly right when he suspects that glaucoma can be caused by focal infection. We usually do not get to see the eye early enough in the disease. It brings to our mind that the patient should be looked after in a more careful manner, and all focal infections removed and the patient kept in as good condition as possible as a preventive measure.

Dr. C. W. Hawley, Chicago: I am quite pleased with Dr. Roth's paper for personal reasons of my own. Quite a number of years ago I began advocating before eye societies that glaucoma was possibly due to something besides a local manifestation in the eye. I read a paper before the Pacific Coast Ophthalmological Society, reporting five cases of glaucoma which showed themselves due entirely to intestinal foci. The time is too short to go into explanation of those cases and how I discovered the fact that there were focal infections. There was one very peculiar circumstance—all five were one-eyed people and I was pleased to keep their vision for a number of years till they all died. One was simple glaucoma, the others were inflammatory. The symptoms were due almost entirely, I think, to intestinal poisoning. We found this in examining the urine; there are other things besides indican to look for. You must watch out for other things that are shown in the urine, skatol, indol and the degree of acidity and bacteria. I know a number of years ago friends of mine rather laughed at me when I suggested glaucoma was not local entirely. Now they are studying along the same line. Teeth and tonsils may have something to do with it. My brother out in Seattle promptly removed one tooth and cured glaucoma. I firmly believe in the future we

will begin to look for the cause of glaucoma rather than to hurry it to operation.

Dr. J. H. Roth, Kankakee: I thought I had covered the literature fairly well, and I am sorry I missed Dr. Hawley's reports. So far as an absolute diagnosis of glaucoma is concerned, I believe many cases diagnosed glaucoma are cases of iridocyclitis, and by examination with the slitlamp one can often see the deposits on the posterior surface of the cornea in many cases of hypertension though I have not seen anything other than the pigmentary deposits as already described. I hardly wanted to bring forth the idea that focal infection was the cause or had much to do with it, but many cases of hypertension can be relieved by removing the focal infection.

### THE PREVENTION OF MEASLES†

SOME RESULTS WITH THE USE OF TUNNICLIFF'S  
IMMUNE GOAT SERUM

ARCHIBALD L. HOYNE, M. D.\*

CHICAGO

There are many reasons why methods for the prevention of measles are now receiving the attention which this problem deserves.

Susceptibility to measles is practically universal. The disease occurs in every country, in all climates and among all races and classes of people. Moreover, with the exception of early infancy no age group is exempt. Very few individuals who have lived in large centers of population reach adult life without having measles. During the great war it was found that more than 93% of the men entering the national army gave a past history of measles. And it is undoubtedly because of such factors that the laity generally assumes that every one must have measles, and so a negligent attitude is often taken toward the protection of children from this infection. But that the intentional exposure of a child to measles is a reckless procedure is evident from mortality statistics even though the latter do not include all deaths which might properly be attributed to measles.

During the first three months of 1926 there were 610 cases of measles treated at the Willard Parker Hospital in New York with a mortality of 9.6%. At the Cook County Contagious Disease Hospital 258 measles patients were admitted in the first three months of the present year with a mortality of 3.1%, and during the same

\*Municipal Contagious Disease Hospital.

†Read at the annual meeting of the Illinois State Medical Society, Moline, Ill., June 1, 1927.

period the Municipal Contagious Disease Hospital had under treatment 90 measles cases with a mortality of 4.4%. All of the 8 deaths which occurred in the Cook County Hospital series were due to broncho-pneumonia which was present and diagnosed at the time of admission. A mortality study, by Emerson and Hopping,<sup>1</sup> of a five-year period at the Willard Parker Hospital disclosed that among 3,720 cases of measles the fatalities amounted to 15.7%. The same report also shows that 63% of the measles patients developed complications. Such figures as those quoted cannot fail to impress one with the dire consequences which may ensue from a measles attack.

Within the first four months of the present year 15,314 cases of measles were reported to the Chicago Health Department and among that number 96 deaths were recorded. How many of the survivors are still suffering from complications is not known. On the basis of the Emerson and Hopping study there might be as many as 9,647 physical defectives still requiring treatment because of an attack from an "insignificant disease."

Before discussing the newer methods suggested for the prevention of measles, it may be well to refer to some other considerations which bear a relationship to this matter. The mode of transmission must necessarily be given thought. Rarely is it claimed that measles is acquired only through direct or indirect contact. There are actually few who possessing any knowledge of the subject but will readily admit that measles is air born within certain limitations. Moreover, there is good evidence for believing that measles may only be carried by a third person when the distance and duration of time between the patient and susceptible is very brief. Such transmission might occur in a hospital or institution if a nurse or physician, without taking proper precautions, passed from a measles patient directly to a susceptible in a nearby room. On the other hand a doctor going from the home of a measles patient out into the open air would not carry the disease to another patient a block away.

The contagion of measles may be compared to the sparkler we see at Christmas time. When the latter is ignited it sheds a flaring brilliancy, but in a few moments the dazzling light not

merely fades—it becomes extinct. So with measles, the intensity of its contagion, while it lasts, is unsurpassed by any other infection, but its life is short. The infecting agent is expelled through the respiratory passages of the sufferer and if viable produces measles after entering the respiratory apparatus of a susceptible. Apparently, however, the causative organism of measles meets a hasty death when submitted to a temperature below that of the body and, therefore, in order to contract the disease the susceptible must usually be within reasonable proximity to the patient. The distance to which the infection may be transmitted will undoubtedly depend upon two conditions, 1. the surrounding temperature and 2. air currents. Therefore, temperature and methods of ventilation will have a direct bearing on the spread of measles in a hospital or institution. A measles patient in a warm room will be more likely to disseminate the disease to others at a greater radius than a similar patient in a cold room.

As we are all aware, one of the greatest difficulties, encountered in our endeavor to control measles, is attributable to the fact that the disease is contagious before the eruption makes its appearance and therefore, in most instances, prior to the establishment of the diagnosis. We all recognize and accept this truth, but there is some difference of opinion regarding the length of time the measles patient may continue to be a focus of danger.

Not so many years ago measles patients were quarantined for as long as five weeks. Later, the time was reduced to three weeks and now, in this state the quarantine period is only prolonged until five days after the appearance of the rash if the temperature is normal and there are no discharges. This usually means about ten days from the onset of symptoms if the case is uncomplicated. But is there actually any valid reason for quarantining measles at all, provided the diagnosis has not been made until after the rash has appeared? Some believe that with the full development of the eruption the contagious period is passed. Whether this is true or not, there is no doubt that generally all the harm which is going to result from the transmission of the infection has already taken place by the time the rash has developed. Therefore, it seems like a useless expense and waste of effort to pla-



card the premises where measles is located. However, quarantine for all susceptibles with known exposure to measles should be adhered to. And for statistical purposes, if for no other reason, notification of measles should be required. If such a plan were adopted and it was understood by the laity that no placard would be posted for measles, the number of cases reported might show an increase, for then there would be less hesitation on the part of the family in calling a physician through fear of being quarantined. In any event, it is evident that the usual plans now in vogue for the limitation of the spread of measles accomplish little.

Inasmuch as the customary methods for the prevention and control of measles have proven a failure we must adopt other means to attain success. Nicolle and Conseil<sup>2</sup> reported on the use of convalescent measles serum for passive immunization in 1918. A year later Richardson and Connor<sup>3</sup> gave confirmatory evidence of the value of this procedure. More recently Weaver and Crooks<sup>4</sup> as well as others have published the results of their experience with this prophylactic. However, it is obvious that the question of supply presents a barrier against its general adoption. With a view to circumventing this objection, the blood of adults possessing a past history of measles has been used. But this latter plan is not entirely satisfactory and when resorted to, large quantities, often as much as 30 c. c. of serum, must be used and protection is not assured.

The greatest stumbling block to carrying on a successful warfare against measles has, of course, been due to our etiologic ignorance. However, in 1917, Tunncliff<sup>5</sup> described a green-producing diplococcus occurring in measles. Since then, numerous studies have been conducted and a mass of evidence accumulated which tends to substantiate the belief that this organism is the specific cause of measles.

Based on her former work, Tunncliff<sup>6</sup> produced, in 1925, an immune goat serum<sup>7</sup> for use in the protection of human beings against measles. It is in regard to this serum that I wish particularly to call your attention. One reason preference was shown in selecting the goat rather than the horse for immunization purposes was because it was believed the possibilities of serum sickness would be much lessened.

Reports on more than 200 measles contacts

who received immune goat serum have shown a high percentage of protection. Serum was given only to those who had a very definite negative history for measles. The results obtained were equally as good and often better than when convalescent serum is used. The serum is most effective when given within three days of exposure; more than 90% being safeguarded. Very frequently it is protective four days after exposure and often as late as the fifth day. (These estimations assume that the first day of the measles rash is the fifth day of disease others classify the first day of rash as fourth day of disease.)

Among various groups of children in the wards of the Cook County Hospital,<sup>8</sup> there were forty-eight definite exposures to measles in which the past history for this disease was negative. Goat serum was administered to thirty-nine of the number and among these absolute protection was secured in thirty-four. The other five developed measles in an attenuated form, the eruption appearing twenty, thirty-three, thirty-three, eight and sixteen days respectively after exposure. Many of those immunized received the serum on the first day of exposure and none was injected later than the third day.

Among the nine controls who did not receive goat serum all but one developed measles. Moreover, among the unprotected eight having measles there were two deaths, or a mortality of 25%. Here it should be borne in mind that all of these children who were threatened with measles were in a hospital suffering from some other malady and any additional infection might result in depriving them of their chances for existence. Consequently, it is under such circumstances as this that immune goat serum may be invaluable.

At the Children's Memorial Hospital we have been using the Tunncliff immune goat serum during more than two years past for the purpose of checking outbreaks of measles. We have found that this prophylactic can be relied upon if given to susceptibles within three days of exposure, and that when given later it usually modifies the disease even if it does not prevent its occurrence. Because of the ages of the patients received at the Children's Memorial Hospital, from 70% to 80% are usually susceptible to measles. Therefore, the availability of an efficient measles prophylactic is of vast importance.

It must be remembered, however, that immune

goat serum confers a passive immunity which, in all likelihood, does not endure for more than three or four weeks. So there can be no assurance that because a child is protected at one time it may not acquire measles if exposed again at some future date. If, however, the serum is not given until several days after exposure and measles develops, of course, a permanent immunity follows as from an ordinary attack.

Degkwitz has reported on the use of an anti-measles serum obtained from sheep which have been treated with "measles virus" and organisms commonly found in association with measles. A novel plan is suggested for the use of this serum. It is advised that following the exposure of a susceptible child to measles the serum should be withheld because if given then it probably will not do any good. But after the susceptible has passed through the incubative period, then on the first day of the rise in temperature the sheep serum is to be injected and if the individual develops measles a permanent immunity will result. Degkwitz further says that sometimes there is no rash following use of the serum, but the patient is infectious and can transmit the disease to others. This description concerning the method of giving Degkwitz' preparation sounds very unusual, but possibly my knowledge of his serum is insufficient for the purpose of passing sound judgment. Apparently, it must be intended not to prevent measles, but to modify attacks which are about to occur. From information obtainable, it seems clear that it would be worthless for the purpose of checking epidemics in hospitals, or any place else. Kaupé<sup>9</sup> who has had some experience with Degkwitz serum advises against its use.

#### CONCLUSION

Tunncliff's immune goat serum appears to be a reliable measles prophylactic if given within three days of exposure. If given later, it is likely to modify an attack of measles should the latter develop.

Although serum rashes have developed in 13% of some of the immunized groups, no serious reactions have been observed.

Regardless of physical condition there is no contraindication to the use of immune goat serum.

The serum should be given intra-muscularly in 5 c. c. doses as a rule. If more than three days

have elapsed since exposure the dose should be doubled.

Immune goat serum's chief value is for checking epidemics of measles, particularly in hospitals and institutions. It does not confer a permanent immunity.

The great advantage of immune goat serum over human convalescent serum is due to the ultimate possibility of its general availability.

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#### DISCUSSION

Dr. Louis J. Halpern, Chicago: The recent epidemic of measles also invaded the pediatric medical ward at the Cook County Hospital and afforded me a splendid opportunity to attempt immunization against the disease by means of goat serum. This ward houses approximately seventy children, varying in ages from a few months to twelve years. The work was done along the same lines as that done by Dr. Hoyne and the goat serum was obtained through the courtesy of Dr. R. Tunncliff. Fifty patients in all had been exposed to measles and they all gave a definite history of not having had measles. Seventeen of these were immunized with 5 c. c. of goat serum and then introduced into the ward where patients had measles. Eighty per cent. of these seventeen were protected. Ten patients received serum on the first day of exposure and by the first day of exposure I mean that the active case of measles was in his fourth day of the disease. This is in accordance with the method of Zingher and that used also by Dr. Hoyne in his work. Of these ten patients, 50 per cent. were protected. Four patients received serum on the second day of exposure and one was protected, one developed measles and two died within the incubation period of measles from illnesses for which they were admitted to the hospital. Ten received serum on the third day of exposure and seven were protected. Of the remaining three that devel-



oped the disease, one manifested it on the 24th day after exposure, and one on the 51st day after exposure. It is likely that these two were re-exposed. Three patients had goat serum on the fifth day of exposure and one was protected. Even as late as the sixth day of exposure serum was given to six patients and two of these were protected, three developed measles and one died four days after receiving the serum from the illness for which he had been admitted. In summarizing, fifty patients were exposed as late as the sixth day to active cases of measles, and fifty-six per cent. were protected. Ten per cent. of this series died, four, five and six days after receiving serum from illnesses for which they were admitted to the hospital. We do not know how many of these would have been protected had they lived, but it is safe to say that the total percentage of protection would have been even greater.

The outstanding feature of this work lies in the fact that not a complication or serum reaction developed in those patients that goat serum failed to protect, and these developed attenuated forms of the disease. If we can effect such a high percentage of protection and in addition, give those that the serum does not protect an attenuated form of the disease with permanent immunity, without complications or serum reactions, then I think we have found something worth while in goat serum.

Dr. Maurice L. Blatt, Chicago: I have listened with a great deal of interest to this paper, as most of the orator's work is familiar to me and a good many of the cases have come under my observation. The problem is one of interest, I am sure, to every member of the medical fraternity, not alone to public health organizations but to all physicians practicing anywhere in the world. There are, without doubt, certain children that ought to be absolutely protected against measles, if possible; that is, those children who are suffering, for instance, from other diseases at the moment, those individuals who have already been infected with tuberculosis and certain infants whose feeding alone ought to be a sufficient problem for the time being. And with this serum we have been able to do a great deal.

You must know, after listening to Dr. Halperin's discussion the type of children that we see at the county hospital. We have a type of child, a feeder particularly, in very, very bad condition, and it takes little more than a very mild furunculosis to have those go to exitus. So that these statistics of Dr. Hoyne, though they seem to you rather unfavorable, to us are rather favorable because we know that our death rate in this same group of children in previous years, unprotected by goat serum, would have been perhaps, three times what it was here. We have been able to cut down our broncho-pneumonia and otitis media and, with the cutting down of otitis media, our mastoids and our deaths. We have had almost no otitis media in those cases in which we use the serum.

Naturally, all of us know that the proper way to

immunize against measles is the same as we would immunize against smallpox, but we are not at this time, in a position to do this thing; so we do the best we can.

I think Dr. Tunncliffe has chosen, very wisely, goat serum and not horse serum. With the common use of the toxin-antitoxin many of our children are immunized against diphtheria at an early age and sensitized against horse serum. You are all familiar with the reactions in the use of horse sera, in your experience with antitetanus, and diphtheria antitoxin. It is very violent and if we can in any way, save any of these children from such reaction by the use of sera from other animals than the horse, it is certainly desirable.

I must say that we were not able to materially shorten our epidemic at the County Hospital and the reason is this, that we are not able to entirely close the ward. The ward must remain open for such emergency cases as cannot be taken in elsewhere. When such cases come in, in addition to whatever else they may have, and develop measles on the third or fourth day after they have been in the open ward, we cannot, of course, entirely control the epidemic. Although we did shorten it, we did not clear it out completely in as early a period as we could have done could we have closed the hospital. With the new children's hospital completed, we can prevent much of this type of cross infection.

Dr. Hoyne, in response: I am glad that Dr. Halpern emphasized the point in regard to complications, and also the harmlessness of this serum. When you consider those figures which I spoke of, in the Emerson-Hopping report, they are astonishing. Of course, I don't know just what their system of treating measles is in New York or whether a more severe type of the disease is encountered there, but I cannot recall any time in my own experience when as high as 15 per cent. of the cases were lost in Chicago hospitals. Fifteen per cent. is a very high mortality for any infectious disease and if the death rate exceeded this figure during a five-year period, I am surprised the hospital cared to have it published.

In the New York report already referred to it was stated that 63 per cent. of the patients had complications. This is difficult to understand if acquainted with results in Chicago hospitals where light and well ventilated wards are classed as necessities in the care of measles patients and complications rarely occur in more than 10 per cent. of those treated.

As I think I mentioned in regard to the eight deaths which occurred among 258 measles patients at the County Hospital during the first three months of this year, every one of those eight patients had broncho-pneumonia when admitted, and those were the only patients who died.

Even when this serum does not prevent the disease, it does seem to help eliminate complications. Therefore, I think this fact alone would justify its use, since it absolutely does not harm the patient.

I am very glad that Dr. Blatt spoke on this subject because it was largely due to his courtesy as

head of the pediatric department in the Cook County Hospital that we had the opportunity to immunize a number of these children. Dr. Blatt has been in very close touch with the situation and I think is about as familiar with the results obtained by the use of immune goat serum as any one.

Dr. C. S. Nelson, Springfield: What caused the death of those children that were given the serum and died in seven or eight days after having received it?

Dr. Hoyne: The ones that Dr. Halpern spoke off?

Dr. Nelson: Yes.

Dr. Hoyne: Dr. Halpern has given the immune goat serum to some patients that I haven't seen, so perhaps I am not in a position to answer that. However, patients in the pediatric ward of the County Hospital are often in a dying condition when admitted. Many are malnutrition cases, and cases of Pneumonia, and if the serum were given to those children, it in no way contributed to their deaths. We have given serum with the object of protecting such cases from measles, since if this purpose could be accomplished the possibility of surviving the malady that brought them to the hospital would be greatly enhanced.

I have not seen any bad results or any severe reactions in any child that has received this goat serum.

I think, perhaps, Dr. Halpern could tell us something further about those five deaths which he mentioned.

Dr. Halpern: Those cases were, just as Dr. Hoyne said, malnutrition cases or pneumonia cases. They were very ill when they came in and it was thought, as long as they were in contact with measles, possibly protection from another disease as measles might help them get through with the original disease for which they were admitted.

25 E. Washington St.

## ROENTGENOLOGIC ASPECTS OF LITHOPEDION\*

B. R. KIRKLIN, M. D.

Section on Roentgenology, Mayo Clinic  
and

HAROLD E. SIMON, M. D.

Fellow in Surgery, The Mayo Foundation

ROCHESTER, MINNESOTA

Lithopedion literally means a stone child, but the name is applied to any fetus in which the soft tissues or the fetal membranes have become infiltrated with calcium salts. Küchenmeister has classified lithopedion into three groups:

1. True lithopedion, in which the fetus alone has become calcified; the membranes have either

been destroyed or have become intimately associated with the fetus.

2. Lithokelyphos, in which the membranes alone have become calcified; the fetus has either become mummified or skeletonized, and may be contained within the calcified membranes as in a shell.

3. Lithokelyphopedion, in which the fetus as well as its membranes have been infiltrated with calcium salts.

Although the roentgenologic data in such cases are characteristic, and, with the clinical

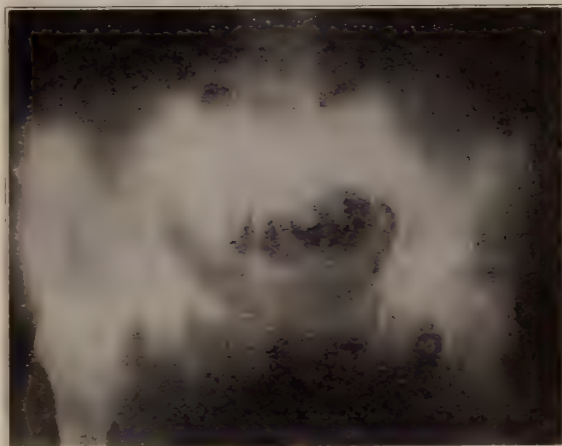


Fig. 1. Lithopedion in Case 1. A fetus developed to about the seventh month and retained in the abdomen for sixteen years.

history, are usually pathognomonic of the condition, only a few instances have been reported in which roentgenograms have been taken, and none in which there is definite evidence that a roentgenologic diagnosis was made before operation.

*Literature*—Three cases have been reported in the literature in which roentgenograms of the pelvis were made prior to operation. In two of these the shadow was not interpreted until after the operation, and in the third case, that of Roster, it is not stated at what time the diagnosis was made.

Roster's case, reported in 1901, is the earliest on record, but the details of the observations are not given.

In Martin's case, reported in 1911, the patient was a woman, aged thirty-nine, from whose abdomen a lithopedion was removed after its retention for about five years. The roentgenogram showed an indistinct shadow low in the

\*Read before the Illinois State Medical Society, Moline, Illinois, May 31, 1927.



pelvis. The shadow of the humerus could be identified in this instance, but it was not recognized as such until after the diagnosis had been established at operation.

In McCormick's case, that of a woman, aged seventy-three, a history was given of false labor fifty-one years previously; a diagnosis had been made of retained fetus. A roentgenogram revealed "an unexplained shadow in the pelvis" and at necropsy a lithopedion was found.

Spitz in 1910-1911, published the roentgeno-

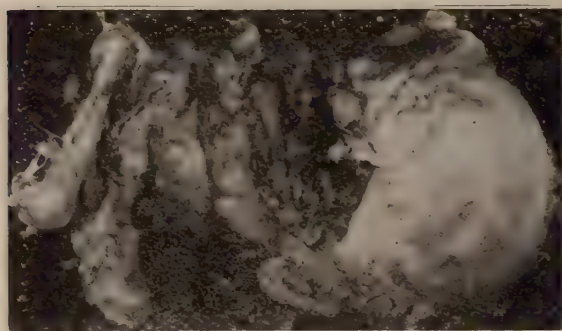


Fig. 2. Case 1. Partially calcified fetus and membranes.

gram of a lithopedion, evidently taken after operative removal of the latter.

*Report of cases*—Lithopedion was observed in the Mayo Clinic in nine cases during the last twenty-five years; all of the cases were verified at operation or necropsy. In two, roentgenograms of the pelvis were made, and in each instance they disclosed unmistakable evidence of the presence of a lithopedion.

Case 1. The patient was a woman, aged thirty, who had had one child. Sixteen years previously menstruation had ceased, the abdomen had enlarged, and secretion had appeared in the breasts, and at the end of three or four months she had become aware of fetal movements. After seven or eight months she experienced slight pain in the left side, but normal labor pains did not appear. Subsequently the abdomen gradually became nearly normal in size, and the patient regained her health. Menstruation was normal until eight months before examination, when it began to be irregular. Slight frequency of urination was noted.

The patient had not lost weight. There was a hard nodular mass in the pelvis a little to the left of the uterus. The roentgenograms (Fig. 1) showed the outline of a fetal head in the left side of the pelvis. The density of the shadow appeared out of proportion to its size. Continuing to the right, partially filling the pelvis on both sides and extending up to the level of the fifth lumbar vertebra, was a large oval shadow

which varied in density throughout. Here the outline of some of the long bones could be identified, and there was a fairly continuous narrow zone of denser shadow surrounding the entire mass.

The presence of a lithopedion was diagnosed and September 28, 1920, laparotomy was performed. The greater part of the fetus was free in the peritoneal cavity but it was partially adherent to the sigmoid and omentum. The head was contained within the folds of the broad ligament on the left side. The mass was removed and the uterus, which was adherent and retroverted, was dissected free and fixed to the anterior abdominal wall. The patient's convalescence was uneventful.

The specimen (Fig. 2) was a heavy mass consisting of a partially skeletonized fetus with the cord and remnants of the placenta attached. The membranes partially surrounded the fetus, and were closely attached to it at several points. Microscopically they showed hyalinization and calcification. The soft tissues of the fetus were shrunk, absent in places, and showed gross and microscopic evidence of calcification (lithokelyphedion).

Case 2. The patient, a woman, aged twenty-six, had had one child eleven years previously. She had not had miscarriages. About two years before the examination menstruation ceased, and severe pain in the back and several fainting spells occurred. The abdomen increased in size, but she was not aware of any movements, as with her former pregnancy. At the end of about nine months she experienced labor pains and passed small pieces of tissue but no fetus. Subsequently the abdomen gradually decreased in size and menstruation reappeared, but backache persisted.

A movable mass was palpated in the lower part of the abdomen; it appeared to be attached to the uterus. The roentgenogram (Fig. 3) revealed the outline of a large fetal head occupying the entire right side of the pelvis. The remainder of the fetal skeleton could be seen distinctly lying across the pelvis at an angle of about 10 degrees with its transverse axis. The fetus was removed at operation and the patient convalesced uneventfully.

The specimen consisted of a degenerating fetus of about eight months' development with the cord and placenta attached. The latter was firm and, on section, produced a grating sensation; extensive hyalinization was present, and the tissues were infiltrated by calcium salts. The membranes were thickened and somewhat cartilaginous; they partially surrounded the fetus and were closely attached to it at several points; on microscopic examination the structures appeared to be fairly well preserved; there were deposits of calcium salts throughout, but especially marked within the vascular channels. The soft tissues of the fetus were firm and did not show gross or microscopic evidence of calcium deposits (lithokelyphos).

#### DISCUSSION

A lithopedion is probably always the result of extra-uterine pregnancy. The retained intra-

uterine fetus usually skeletonizes and probably never develops into a lithopedion because of the presence of infection.

A dead fetus of less than three months' development, within the abdominal cavity, is quickly destroyed and absorbed, but one of longer development is likely to be transformed into a lithopedion unless removed surgically. In most cases reported in the literature these fetuses have developed to at least the seventh month, and frequently to term.

The extent of the calcification depends, not only on the length of time the fetus has been retained, but on the conditions influencing the deposition of calcium salts, the exact mechanism of which is not well understood.

The fetal skeleton in cases of intra-uterine pregnancy is demonstrable in the roentgenogram at the end of three and a half or four months. In a lithopedion, therefore, the skeletal system will be visible in practically every instance, and it will be even more distinct than that of an intra-uterine fetus because roentgen rays are better able to penetrate in the absence of amniotic fluid and the highly vascular uterine wall, and also because calcification is more advanced in the lithopedion than in the normal fetus of corresponding age.

The lithopedion is not confined within any natural boundaries, as is the fetus in the case of intra-uterine conception; it is either bound down by adhesions anywhere within the pelvis or it is more or less free within the abdomen. The relationship which the various parts of the fetus bear to each other will also vary greatly, and in many instances will not conform to any of the attitudes that are considered normal for intra-uterine pregnancy. Sometimes there may be advanced or even complete disarticulation of the fetal skeleton, and the specimen may consist of a calcified sac representing the fetal membranes, containing the fetal bones. To make the diagnosis it is necessary to identify some of the fetal bones in the roentgenogram.

Other tissues besides the skeleton, which have become infiltrated with calcium salts, will produce extraskeletal shadows of varying density and outline depending on the extent of the calcification and the portions of the products of conception involved. If the soft tissues of the fetus alone are calcified they will produce an oval shadow conforming to the outline of the

body. If the membranes or the placenta are calcified and the fetus is either mummified or skeletonized (lithokelyphos), the extraskeletal shadow may appear as a shell of more opaque material surrounding the skeleton, as seen in our Case 2. If both the soft tissues and the membranes are infiltrated with calcium salts, as in the lithokelyphopedion, Case 1, the roentgenologic picture does not differ materially from that of a lithokelyphos.

The shadow of a retained intra-uterine fetus which has become skeletonized differs from that of a lithopedion in that there is no shadow cor-



Fig. 3. Lithopedion in Case 2. A fetus developed to term and retained in the abdomen for two years.

responding to the calcified soft tissues or membranes such as characterize the shadow of a lithopedion. In the case of advanced extra-uterine pregnancy the shadow will be distinct, but here again there will be no shadow corresponding to the calcified soft parts or membranes. The roentgenologic data and the history of the case will make the diagnosis certain in practically every case. The pregnancy responsible for the production of the lithopedion will have occurred from two to more than fifty years previously and none of the signs or symptoms of pregnancy will be present at the time the patient is examined.

#### SUMMARY

The observations in two cases of lithopedion are presented. In both instances shadows of the



lithopedion were shown in the roentgenogram. The roentgenograms in such cases are characteristic, often in themselves and always in conjunction with the history being pathognomonic. The characteristic shadow consists of skeletal and extraskeletal elements. The skeleton may assume a normal or an abnormal attitude or be completely disarticulated. The shadow is denser than that of an intra-uterine fetus of corresponding size. The extraskeletal shadow is produced by the infiltration of calcium into the membranes or soft parts of the fetus.

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## DISCUSSION

Dr. P. B. Goodwin, Peoria, Ill.: The only thing I can add is that we observed a case similar to this, not as long duration, in which the tube had been ruptured. It was not diagnosed by means of the roentgenogram, but was found on surgical operation. The patient was mentally deficient following the decomposition that occurred.

Dr. Irving Stein, Chicago: Over a series of cases we had a number of intra-uterine feti, so-called missed abortions rather advanced uterine pregnancies, but in none of these did we find lithopedions. We have not had the opportunity to observe a single lithopedion, or to recognize one in our series.

Dr. Preston M. Hickey, Ann Arbor, Michigan: I would like to ask what age was that and how far along was the fetal age?

Dr. B. R. Kirklin, Rochester, Minnesota: I feel like apologizing for presenting a subject of this sort, because it does not have very much practical value. My reason for presenting it is because it is rather unusual, and we could find no cases reported in the literature in which the diagnosis had been made roentgenologically.

I think the average age of the fetus in the cases observed at the Mayo Clinic was from seven to eight months, but they may occur at any age after four or five months.

I want to thank Dr. Stein and others for the discussion. I was hoping we might have the opportunity of hearing some cases reported.

I wish to thank the officers of the section for the privilege and honor of being here and taking part in the program.

## NEWER PHASES OF NEPHRITIS AND ITS TREATMENT\*

JACOB MEYER, M.D.

Attending Physician Cook County Hospital; Associate Attending Physician Michael Reese Hospital and Mt. Sinai Hospital; Assistant Professor of Medicine, University of Illinois Medical School.

CHICAGO

In presenting the newer aspects of nephritis one must confess that the problems of nephritis of the past decades are the problems of nephritis of today. Since the time of Richard Bright various observers have sought to clarify the manifold problems of renal disease. The anatomists have sought to correlate renal post-mortem studies with the clinical picture, but have failed to explain the various manifestations.

The advent of physiological studies has aided to a certain degree in understanding and differentiating different types of renal disease. Time was when albumin in the urine was considered synonymous with nephritis. Today we have more definitely classified this condition. We know that it may be independent of renal disease, that it is a normal occurrence following exertion, excessive food, horseback riding, posture. In children particularly it may be a benign condition. May I refer to a brief classification of benign albuminuria suggested recently by Dr. Calvin, Miss Isaacs and myself. We divide benign albuminuria as follows:

(a) Malnutrition albuminuria, frequently associated with anemia, underweight and systolic basal murmur. Foci of infection, especially infected tonsils, adenoids, nasal sinuses and carious teeth, are common causes of this malnourished condition.

(b) Orthostatic albuminuria, associated with posture.

(c) Idiopathic or "growth" albuminuria, including the terms juvenile, puberty, cyclic, transitory and intermittent.

A review of the literature of nephritis of the past years reveals studies which are concerned with the "functional" test of the kidney. These studies have been made not only to understand how the kidney functions, i. e., is it a filter? does it secrete? has it a selective action on certain colloids and crystalloids? but also, what changes

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occur in these functions which enable us to say whether the kidney is impaired, or the lesion progressive. Thus, studies of the blood chemistry, have shown a normal concentration for such substances as urea, nonprotein nitrogen, creatinin in the blood, and in disease of the kidney the failure to excrete these in urine is evidenced by an increase in their concentration in the blood. Other functional tests, of the excretion of dyes, such as phenolsulphonthalein, urea concentration test, and water concentration test of Volhard, Mosenthal, Schlayer, and others may be mentioned. I do not propose to go into the detail of tests of kidney function at this time, nor to concern myself with the review of the literature of experimental nephritis.

I wish to present nephritis as a disease process which depends solely on whether or not changes have occurred in the vascular structure of the kidney, viz., the glomerulus. The *absence* of glomerular change indicates a kidney lesion which is not truly "nephritic" or progressive in character. This essentially constitutes the basis of the Volhard classification. For purpose of clearness may I present the Volhard classification of renal disease, modified as follows:

1. *Focal Nephritis*: These are acute hemorrhagic glomerular nephritis, involving a number of glomeruli, characterized by hematuria, and unassociated with increase in blood pressure, or alteration in kidney function. They are associated with acute infections, tonsillitis, otitis media, grippe, etc. They are not progressive in character. They are best treated by rest in bed, simple laxative, and eventually removal of the possible focus of infection.

2. *Nephrosis*: A primary degenerative process, which involves primarily the tubules. Of the nephrosis there are two types, (a) those associated with acute infectious disease, such as diphtheria, pneumonia, and (b) the so-called true nephrosis or lipid nephrosis. At the present time much interest is centered on the subject of nephrosis. Some authorities do not consider it as a true disease of the kidney, rather as a constitutional disturbance, associated in some cases with thyroid deficiency; in some with gout, lues?, staphylococcus infection. This condition is characterized by insidious onset, pallor, weakness, development of edema, ascites and albuminuria. It is striking in contradistinction to

nephritis, that there are no evidences of vascular changes in this disease. The blood pressure is normal, the heart is not increased in size, there are no retinal changes. Kidney function remains unaltered except for the excretion of chlorides. The blood chemistry shows no nitrogen retention. The blood cholesterol is increased, the normal albumin-globulin ratio of 5/3 is changed to 0.5/3. Albumin in the blood is very much diminished. Fibrinogen is increased. A great deal of stress is placed on the lowering of surface tension. The urine is small in amount, specific gravity is increased, the albumin is five to ten per cent. and the sediment reveals many double refractile lipid substances. No red blood cells are said to occur in *true* nephrosis.

These patients generally proceed through periods in which edema disappears, then recurs. They generally die of some complicating disease, most often a pneumococcus peritonitis.

Such cases are best treated at present by high protein diet. The diet recommended by Epstein in essence is 1.5-3 grams of protein per kilo in the form of cheese, white of egg, oysters, fish. Fats are reduced to a minimum and carbohydrates are given according to the desires of the patient.

The fluid intake is apparently not material in these cases. To promote diuresis, thyroid extract, novasurol, saliogen, and urea are of value. The cases of true nephrosis are not common. I have seen but one during my service at Cook County and one case on the service at Michael Reese Hospital.

3. *True Nephritis*: Acute diffuse nephritis characterized by hematuria, edema, and increase in blood pressure. To illustrate I wish to present the following case:

This patient is a young man, 21 years, who entered my service at Cook County Hospital February 6, 1927, complaining of pain in the lumbar region, blurring of vision, swelling of the face. Ten days previous to admission, he became suddenly sick with sore-throat, chills, headache, after which he remained in bed for a day or two. Returning to work he experienced pain in the lumbar region, general indisposition, and swelling about the eyes and face which has increased. In addition he began to have severe headaches and vomited several times. His previous history is not of interest. Physical examination reveals



a young individual, who is pale, and whose eyelids are quite swollen. The tonsils are hypertrophied and injected. The heart and lungs are normal. There are no other findings. Blood pressure is 170 systolic and 116 diastolic. The urine on admission shows a specific gravity of 1016, albumin ++. Blood is ++. Microscopic examination reveals red blood cells, in abundance, many granular casts, and a few white cells. Blood chemistry on the day of admission showed N. P. N. 54, urea 70, creatinin 3. The increase in nitrogenous substances in the blood is confirmatory of a severe acute nephritis. On discharge from the hospital, March 5, 1927, blood pressure was 126/84, albumin +; blood chemistry: N. P. N. 41, urea 47, creatinin 1.7.

By outlining the possible events or stages in a case of this type, we can more readily appreciate the pathology and the course of treatment. What courses may this case pursue? (a) Recovery; (b) acute uremia; (c) acute cardiac failure; (d) recovery with development of chronic nephritis, with edema or without edema, terminating as a secondary contracted kidney with the picture of kidney insufficiency, or apoplexy, or cardiac failure, or uremia.

Volhard believes that in acute nephritis there is a vasomotor spasm of the vas afferens, and the resulting ischemia is responsible for the changes in the glomeruli. He therefore advocates what is now known as the hunger and thirst treatment of Volhard. This consists in the restriction of all liquids and foods for a period of three to five days. During this time the patient may be given a mild laxative, such as castor oil or cascara. Epsom salts may also be given. Simple fruits, raw or cooked, such as apple, prune juice, may be given. Such a regime is on the whole not a great burden to the average patient. In a young child there is no particular difficulty. One is rewarded by the fall in blood pressure, a gradual disappearance of edema and an increase in urinary output. Volhard suggested that this period of hunger and thirst be followed by the administration of 2000 c. c. or more of fluid. It is probably better not to use this procedure but it is wiser to limit the fluid intake to the output. The dangers of an excessive fluid intake are that it tends to throw excessive work not only on an already inflamed organ, but may overtax the heart producing cardiac failure.

Can we eliminate "toxins" by forcing fluids? Have we not been taught that the kidney needs rest and do not the dangers of cardiac overstrain and increased blood pressure contraindicate the use of excessive fluid? This is particularly the question in the acute uremia with anuria. Volhard justly calls attention to the ever increasing danger, because of the increased blood pressure, and advises methods to relieve the increased vascular spasm. Thus again he advises a preliminary hunger and thirst cure, and in more severe cases venesection. The amount of blood removed will depend on the blood pressure and condition of the heart. Removal of 500-800 c. c. suffices. The other methods, such as catharsis, sweats, spinal puncture, are also to be used. Decapsulation of the kidney is sometimes advocated by some authorities in severe cases with anuria. On the whole, I think you should consider this measure as a last resort. The effect is often questionable and the explanation of the possible effects somewhat in doubt. At one time it was believed that decapsulation relieved the intrarenal spasm or pressure. Recently some writers believe that the effect is due to the nonspecific protein reaction associated with the surgical procedure, and independent of decapsulation. This parenteral absorption of protein has stimulated considerable work. Milk injections, foreign protein, and even roentgen rays, are now being used in the hopes of stimulating the kidney. While numerous reports are available from varied clinics, it would seem that definite conclusions are not available and the simple procedures, such as venesection, heat, catharsis, still give the best results.

What of the heart? I believe that this is most often neglected in the acute nephritis. Every acute nephritis should be considered as a cardiac case. Every acute nephritis is associated not only with increased blood pressure, but increased pulse rate, dyspnea, and as the case progresses with circulatory embarrassment. Acute cases may present the picture of acute cardiac failure. I have adopted a routine of ordering ten to fifteen minims of tincture of digitalis in all cases of severe acute nephritis.

The major acute complications having been considered, what procedure should be followed to prevent the development of chronic nephritis and its progression into the secondary contracted kidney or insufficient kidney? The preliminary measures have already been described in the discus-

sion of the thirst and hunger cure as recommended by Volhard. It is well to follow the first days of starvation with the continued administration of fruits and fruit juices, with a sufficient amount of lactose and glucose. The sugars will aid elimination by the gastro-intestinal tract by producing fermentation and resulting in diarrhea. Foods, such as rice, cream of wheat, cream, salt-free butter, potatoes, salt-free bread, butter, cocoa, and coffee are added. It must be remembered that the caloric value of such a diet may not meet the caloric needs of the patient. This will not be harmful in the acute stage, but as the patient progresses and improves it is necessary to increase the caloric value of the diet. Cream, butter fat, and glucose, are very valuable foods for this purpose. The term low protein salt poor diet is now generally used by a great many individuals, who are not thoroughly aware of its meaning. The general notion among students and some practitioners is that it is a "milk diet." It is well to remember that milk contains a great quantity of salt, is high in protein—a diet which throws a great deal of work on the kidney.

As the edema subsides and the blood pressure falls, and the urine becomes clear containing only small amount of albumin, the diet can be gradually increased so that the patient receives not only a greater amount of carbohydrates and fat, but also protein is increased to 40-50 grams per day. This amount permits a liberal choice of protein and may include eggs, and meat. There is a much mistaken notion as to the dangers in meat and eggs. Well cooked meats, from which all the substances have been extracted, probably are not as dangerous as the fried meats or roasts or rare meat. Such meats as liver, thymus, kidney and brain, ham and sausages, and all spiced meats, and spices are best avoided. As for eggs, I see no particular harm in including them in the diet if the total protein intake is restricted to about 50 grams per day. Vegetables are a very desirable adjunct in a nephritic's menu. Among these may be mentioned asparagus, cauliflower, carrots, peas, turnips, squash, beets, string beans, etc. Your patients will also inquire as to spinach, rhubarb, and tomato, but personally I see no harm in them, even though they are known as oxalate producing vegetables. Patients are to be advised as to the nature of the diet on

discharge, recommending foods as indicated above and advised to return in a period of three months for blood pressure and urine examinations. During this period all foci of infection, such as infected sinuses, diseased tonsils, are to be treated and if possible the focus removed. The presence of an infected tonsil is a constant menace to an individual who has had an acute nephritis.

You will have observed that thus far I have not mentioned drugs other than the simple laxatives in the early stages, and the drastic cathartics in the stage of uremia. On the whole, all are fairly well agreed that drugs are of little value in acute nephritis. I might emphasize however again, that digitalis in some cases with severe cardiac failures should be used.

What of the other forms of chronic nephritis? These are classed by Volhard as the scleroses. He divides them into benign hypertension and malignant hypertension. Time will not permit a detailed discussion of this group. Essentially this group represents the same problems in therapy and prognosis. The true benign hypertension known to us as essential hypertension, should give us the only concern, inasmuch as we should try to prescribe all measures, which may prevent it from progressing rapidly into the malignant form. Once we have a malignant hypertension, the problem of treatment resolves itself as (a) treatment of cardiac failure, (b) chronic uremia or kidney insufficiency, (c) apoplexy, (d) uremia. Treatment of these complications are essentially as already explained. Our duty and task is the early recognition of the transition of a chronic benign kidney lesion to a malignant form. Simple tests, such as determination of specific gravity (the concentration test), changes in blood chemistry, the early detection of a positive indican and xanthoprotein reaction in the blood serum, nocturia, changes in the retina, are our best clinical guides.

25 East Washington Street.

#### DISCUSSION

Dr. James H. Hutton, Chicago: We frequently express our ignorance in a multiplicity of terms and classifications. Perhaps, the large number of classifications of nephritis may express the same idea. Unfortunately, such a state of affairs serves only to confuse the average man so that he not only has to study the diseased condition which his patient may present but also has to try to orient himself in the



language of the literature, the latter being not always the least of his trouble. If we had one terminology and one classification, no matter if it were not correct, we should be in a better position until our knowledge of the condition has improved.

Probably many of us still think in terms of fifteen years ago. When we heard much about acute nephritis, chronic parenchymatous and chronic interstitial nephritis. Will the essayists please tell us, if that is possible, what the old terms mean in the newer terminology and classifications? If we understand that perhaps we can translate our old fashioned knowledge in terms of the new fashioned classifications.

We are indebted to the essayists for emphasizing a few points and refreshing our memory regarding others. Albuminuria is not pathognomonic of nephritis, and it not per se an indication for limiting the protein intake. There is little evidence of a direct relation between the proteid intake and the amount of albumin excreted in the urine. Indeed, some men give a high proteid diet to cases of lipoid nephrosis.

There is a lack of close correlation between renal pathology and the symptomatology of nephritis and nephrosis. If the latter term is to be a fixture in renal literature its meaning needs to be emphasized and the difference between nephritis and nephrosis needs to be clarified repeatedly as our essayists have done.

Nephritis seems to be characterized etiologically by its relation to some acute infectious process, pathologically by an involvement of the glomeruli and symptomatically by the presence of hematuria, increased blood pressure, and an alteration in kidney function as exhibited by a change in the blood chemistry. Of this there seem to be two varieties, the acute focal nephritis and chronic true nephritis which is characterized by the same conditions as mentioned regarding the acute variety, except that the duration is longer and the process is probably progressive, the symptoms increasing in severity as more and more of the glomeruli are involved.

Nephrosis seems to be characterized etiologically by an association with acute infections, with some constitutional disturbance, such as lues, gout, or even a thyroid deficiency. Pathologically it is characterized by an involvement of the tubules in a degenerative process. Symptomatically it is associated with an insidious onset, pallor, edema, acites and albuminuria. There are no cardiovascular changes, no alteration of kidney function, no change in blood chemistry except an increase in the cholesterol and a change in the albumin-globulin ratio.

It is well that we should again be reminded that milk contains a considerable quantity of salt and protein and is not always the best diet for the nephritic. Since some of our public health authorities have chosen milk as a vehicle for personal publicity we are apt to forget that it is not a cure all in a diatetic way. We are fortunate in having two speakers remind us that some of the carbohydrates are very valuable in the handling of kidney diseases.

## THE NON-OPERATIVE TREATMENT OF GLAUCOMA\*

HARRY GRADLE, M. D.

CHICAGO

The field of non-operative treatment of glaucoma is so large that it is rather necessary to confine ourselves to a few simple phases. In consequence, I shall endeavor to confine my remarks to simple non-inflammatory glaucoma. The diagnosis will not be discussed. We will assume that diagnosis has been established along the lines of Dr. Suker's dissertation of yesterday. We will assume we are dealing purely and simply with the question of treatment. Our treatment of non-inflammatory glaucoma in the majority of cases is not an immediate emergency. We can take time to feel our way, to feel the reaction of the patient to diverse measures, both local and general. I agree with Dr. Roth that the physical condition of the patient should be gone into thoroughly, and that the individual resistance of the patient be brought up to the maximum. That is rather a question for the internist than the oculist to concern himself with. We confine ourselves strictly to local treatment of the eye. Our treatment must be based upon symptoms and the way they are influenced by our treatment. There are three major factors upon which we must base our procedure. I have reference to intraocular tension measured tonometrically; I have reference to visual fields, and by that I mean more particularly the peripheral fields than the central, because the central fields are not so influenced by treatment as are the peripheral; the third is the vision. Let us call this the triad of symptoms upon which we base the course of our treatment. Of course, there are a number of other things that apply; we are unable to differentiate the finer points, for example, excavation of the optic nerve head, a change in the color of the optic nerve head, changes in dark adaptation that may occur; these are of value in diagnosis, but of minor value in evaluating our treatment. There are two forms of simple non-inflammatory glaucoma—I prefer glaucoma simplex—in which the disease is in a comparatively early stage, where the visual fields are not down to a danger point, regardless of the tension, and

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those where vision is reduced below the point of value to the patient. These two types of case require rather different regimes in the management of the patient. In the beginning type we are not pushed; we are not urged into measures of great severity, because we have weeks and months in which we may try out various methods before other measures need be determined. In the first place, these cases should not be operated upon until they have been worked out thoroughly from every standpoint. I believe we should start with a miotic, pilocarpin, for instance, instilled two or three times a day, and the course of the symptoms watched carefully. two or three times a week if necessary. The patient must be instructed to carry out therapeutic massage. I believe it would be a great mistake to start with eserine or more powerful miotics. I furthermore believe it is a great mistake to use eserine in any case for continued treatment. In some cases it is well tolerated over a considerable period of time, in the majority, not.

And I do not believe that a case of glaucoma that requires eserine is a case that is satisfactory for non-operative treatment. If it cannot be carried with a weaker miotic it is not a non-operative case. It is a powerful drug to get you out of a bad situation, but you cannot play around with it. Under the instillation of pilocarpin, one-half or one per cent., the treatment must be watched. Pilocarpin becomes contaminated very easily and becomes more or less irritating to the patient. It is now put up in a different solvent, 1/5000 solution cyanide of mercury. Pilocarpin in 1/5000 aqueous solution of oxycyanide of mercury forms a stable combination which is not affected by the air. The patient may be given 30 c. c. in whatever strength desired. In watching your triad of symptoms several phases are essential. It is absolutely essential that you see your patient at approximately the same time every day, because the time of day has an influence upon the intraocular tension. There is a definite curve of intraocular tension that varies during the course of the day; it is high from five to nine o'clock a. m., sinks between eight and nine and reaches a minimum in the evening between five and six. There is a slight rise between nine and ten in the evening and the level is maintained fairly well during

the course of the night. Early in the morning before daybreak the tension begins to rise. This has been worked out where the tension has been taken every hour. It makes no difference what time you see your patient, but it should be the same time every day. The relationship of the time of instillation of the miotic to the time at which the patient is seen plays an important role. It is not enough to tell the patient to put a drop in the eyes three times a day—eight in the morning, twelve and six—then to show up at the office whatever time suits his convenience between ten and four. See that a definite interval elapses between the time of instillation and the time of examination. Otherwise, minor variations will occur that may throw your records off. I said yesterday that the tonometer was of little value in diagnosing glaucoma, but it is of inestimable value in following the course. We are able to form a very fair estimate of the situation as to the value of the therapeutic measures established. The variation in tension will show the influence of the miotic in clearing the condition. The visual field changes are slow. It is essential to take visual fields every two or three weeks, because the changes appear so slowly that a field after ten days will hardly be sufficient to allow you to use that factor in evaluating therapeutic measures. Visual changes are of value, but of less value than the other two factors in the triad, because the vision is so influenced by the general condition of the patient that minor changes apart from those produced by the glaucomatous condition will occur. If we place too great a value upon the visual changes that may occur during the progress of glaucoma we are apt to be misled.

So the observation of the triad of symptoms under a weak solution of pilocarpin should be our first step. If tension can be maintained down to normal limits and the vision remain essentially the same, keep that patient under pilocarpin two or three or four times a day; oftener than four times a day is sometimes of value. If we find that the glaucoma symptoms are increasing despite our pilocarpin, then we must step the patient up to a stronger solution, two per cent., and if not sufficient, a weak eserine, one-fourth or one-half per cent. solution may be indicated, observing the symptomatology all the time and feeling our way carefully along. It is



impossible to make a bold forward step and give a prognosis without therapeutic feeling of the way. At times we will find it is necessary in controlling the situation to use something stronger than pilocarpin, just as a temporary aid. In that case I have found the following prescription of value for temporary assistance but not for permanent use: eserine sulphate 0.1; pilocarpin nitrate 0.6, adrenalin (1/1000) 2.0; distilled water 30.00. This is for continued use for a comparatively short length of time, consequently, it is not wise to use too strong a solution of eserine. This is a considerably stronger miotic than the same strength of eserine or pilocarpin alone. However, a case that requires any miotic of this strength is not a case for medicinal treatment. Suppose we find that this will not hold our triad of symptoms quiescent? We have still other resources left before operating. Of recent years we have been using adrenaline for this purpose. As you know, there are still some theories regarding the effects of adrenaline, which when properly introduced into the eye causes dilatation of the pupil and at the same time a reduction of tension of the eye. This paradoxical reaction exists, difficult as it is to explain. In our cases adrenalin must be used cautiously because it does bear the possibility of danger. In the early cases, no, but in the later cases where there are adhesions, adrenaline can cause a flareup and acute hypertension. Therefore, in using adrenalin the patient must be under observation, and we must use judgment. If you are dealing with late glaucoma simplex with adhesions, be a bit cautious. It is successful in reducing tension, but it is not a permanent factor. It is really a lift over the rough spots. It may be used as Hamburger advised, subconjunctival injection of three, six or eight minims. A simple way is to put it on a small cotton pledget, putting it into the conjunctival fold and allowing it to remain there two and one-half minutes. In the past few years Hamburger has brought out a more concentrated synthetic adrenalin which has proven of great value as a lift over the rough spots; not a cure, not for continued use, but to help tide over the rough spots, possibly to hold until operation is advisable. This is glaukosan—a synthetic adrenalin concentrated to two per cent. solution. There are two essential forms: links glaucosan and

amine. The amine glaucosan is the most powerful miotic there is. It is used in acute inflammatory glaucoma. There have not been enough occasions to determine its real value, but undoubtedly it is worth trying, although it is so powerful that it must be used cautiously. It does not replace operation in acute glaucoma, but it is for the purpose of overcoming the preliminary attack so that operation may be performed more easily and with a greater chance of success. The links glaucosan acts exactly as does adrenalin. It is instilled by anesthetizing the eye, allowing the patient to recline holding the eyelids open, and instilling two drops into the conjunctival sac and keeping the eyelids open for thirty seconds. Then the patient closes the eye and the excess is washed out; repeat in fifteen minutes and fifteen minutes later, until three to five instillations are given. It causes an anemia not only of the eye and lids but the entire side of the face—from the hair line down to the jaw is blanched. About ten minutes later dilatation of the pupil sets in. It breaks up early iritic adhesions to the lens surface more effectively than any known mydriatic and even better than adrenalin subconjunctivally. The tension begins to fall after half an hour and continues for twenty-four hours. The minimum effect is reached eighteen to thirty-six hours after instillation. This effect is maintained from five to seven days, depending upon the severity of the case, without the use of any further miotic whatever. With links glaucosan, as with adrenalin, there is danger in the late cases where some anterior adhesions have occurred. It is imperative that you observe your cases carefully; in fact, it is almost better to hospitalize the cases so that they can be under observation for twenty-four or forty-eight hours. We may then continue with our miotic and not infrequently it will be found that the links glaucosan has given such an impetus to our result that the patient can be continued under the use of miotics indefinitely. It is a big help in the rough spots. It is not a cure. Frankly, I believe that the majority of cases of glaucoma simplex eventually become operative, but I do believe there is a sufficient number of cases of glaucoma simplex that can be controlled with miotics that we are not justified in operating until we have exhausted our

therapeutic possibilities and until we determine in which class our patient belongs.

#### DISCUSSION

Dr. J. H. Roth, Kankakee: Dr. Gradle let me have some glaucosan and I tried it on one case early last winter. The patient had tension in both eyes, one was 47 with the tonometer and the other 35. The fields were typically contracted. Pilocarpin was used in this case for awhile but did not relieve the tension and finally we resorted to eserine. The tension in the right eye was 39, left 34. Then we got the link glaucosan and inside of one hour the tension dropped to 28 in the right, 20 $\frac{1}{3}$  in the left. He was seen three days later and the tension was about the same. We continued with pilocarpin and after three weeks the tension in the right eye was 26, left 21. Another case with an acute inflammatory glaucoma had already had one eye operated on successfully following an acute inflammatory attack. Tension was 63, and we used eserine. The tension dropped next evening to 28, but continued to rise from April 31 to May 18, until it reached 43, and then we used glaucosan and brought it down to 28 next day. However, it has been going up since May 18, and on May 25 was 35, and will probably be operated on the last of this week. Another case in which we used glaucosan, the tension was 38 in the right eye, left 41. We had used pilocarpin but the tension remained the same. Then we used glaucosan in the right eye and the tension dropped to 24, and has remained around 30 since then. This case was operated on last week. I wanted to ask Dr. Gradle when you open an ampule and do not use it entirely, how long will it remain without deterioration?

Dr. O. B. Nugent, Chicago: I used glaucosan in five cases in the Eye Clinic in Shikarpur, India, this year. Dr. Poyales of Madrid, Spain, brought a small supply of it to the clinic and we had a chance to observe its action in the more severe forms of glaucoma. The drop in tension ranged from fifteen to twenty-four degrees. I did not observe how long the tension remained low as the patients did not remain longer than one day.

Dr. Michael Goldenburg, Chicago: There is really not very much to discuss, but I feel that some points should be stressed. I have very little faith in the non-surgical management of glaucoma, and agree with Dr. Gradle's last statement, that probably all the cases will eventuate in operative interference. However, there are cases where one is compelled to adopt a medicinal routine for economic or systemic reasons or prejudice, and under such conditions I can fully endorse the management outlined by the essayist. The bad feature of endorsing or encouraging such treatment is not the outline per se, but the danger of influencing practitioners of limited surgical training to adopt a medicinal routine in preference to surgery where it is definitely indicated. At the Illinois Eye and Ear Infirmary and in private practice I have seen a great many cases of glaucoma that have been

treated by non-surgical methods over short and long periods, with the most disastrous results. In some of these cases vision was entirely lost or reduced to recognition of hand movements; in others they came in for the mere relief of pain. For a non-surgical regime to be efficient you must have an intelligent patient with the utmost faith in your efforts so that you can depend on his or her co-operation. Unfortunately the great majority of these cases are neither amongst the intelligent, nor have they a faith that is not readily disturbed. The tension and fields must be taken frequently, the education of the patient to recognize the danger symptoms must be rigid. In the non-congestive or simplex type their only complaint is of a gradual loss of vision, and they more frequently first consult an optician. Usually when this type of case reaches the oculist vision is already markedly reduced and surgical interference rarely improves the vision; in fact, it is more likely to be reduced later. This is due to the fibres already destroyed or badly injured that are still feebly functioning, that eventually must die, and our perimetric fields will later disclose greater constriction.

Dr. Harry Gradle, Chicago: In reply to Dr. Roth's question as to how long this preparation may be exposed, it is an unstable preparation. In a cold temperature the contents of the ampule may appear to be crystallized, but the crystals may be dissolved by warming the ampule in warm water. After it has been opened the contents are good for only twenty-four or thirty-six hours, as some chemical change takes place. However, there are only about six or eight drops in one container, so it does not amount to much. I do not consider that all cases of glaucoma simplex are eventually surgical, but I do believe that the inflammatory type invariably becomes surgical. With clinic patients such as are seen at the Infirmary, the regime I have endeavored to outline is entirely impossible. Such cases have to be surgical and as a result the records of large charitable institutions do contain a large number of operations which in private practice would vary somewhat. Abroad it is true that the largest number appear in the clinics. That is not true here. The percentage of private patients predominates over the percentage of clinic patients. I still maintain that the remarks I made hold good, with the exception of the large clinics where one has to deal with a floating population. But in private practice in the city or country, the regime of management from a medicinal standpoint can and should predominate. In the use of miotics in the eye I believe the eyeball should be massaged with the fingers of the patient for about one minute at the rate of 120 depressions per minute. The patient will soon find that he can reduce temporary hypertension with massage. In case we find that the glaucoma simplex—non-inflammatory glaucoma—is of the surgical type that does not yield to medicinal treatment, we must then resort to operative procedure in the endeavor to maintain the function of that eye for the patient. In that endeavor we are obligated



to utilize such measures as in our estimation will give him the best chance of maintaining such vision as is in existence and at the same time, present the least chance of losing the function of that eye from the operation. Consequently operation that does the least possible damage is far to be preferred to one that has a higher percentage of good results but is attended with more danger. There is altogether too much operating on the lines of a filtration operation, which is fraught with danger not only at the time of operation but throughout the life of the patient. An operation bearing less possibility of present and future danger should be advised.

### OTITIS MEDIA IN INFANCY\*

GERALD M. CLINE, M. D.

BLOOMINGTON, ILL.

In the late summer and autumn of 1923 in my particular locality, I was confronted with what seemed an epidemic of otitis media in infancy occurring with various complications. I found very few articles on this particular subject. Keeping records on all cases from year to year soon led me to believe that this malady was much more frequent than one would suspect. So from these records and with the verification of a consulting otologist, Dr. Harold R. Watkins, I have compiled this report. During the past year many more articles have been written on this subject.

The disease itself is intensely interesting to the pediatrician and otologist. Much light has been thrown upon this subject through the various studies of the anatomy, bacteriology and autopsy findings of the infant aural canal and appendages, by such writers as Marriott,<sup>1</sup> Drury,<sup>2</sup> Alexander,<sup>3</sup> Tribble<sup>4</sup> and Deane<sup>5</sup>. According to Drury,<sup>2</sup> the anatomical conditions of the infant auditory duct particularly favor the occurrence of otitis media.

This author states:

The tympanic cavity of infants contains abundant mucous tissue and plenty of fluid in the first few weeks of life. Both are excellent culture media for invading bacteria and the edematous tissue is subject to very rapid purulent transformation. The eustachian tube of this period of life is remarkably short and wide and the muscles are poorly developed. It cannot be definitely denied that in some cases the eustachian tube is not completely closed at birth, and it is through all these conditions that infection of the

infantile middle ear from the pharynx is particularly favored.

Sykes<sup>6</sup> states:

The eustachian tube of an infant is 14 m.m. in length, and horizontal in direction; while the adult tube is 33 m.m. to 38 m.m. long, and passes obliquely upward and backwards to reach the tympanum at a higher level. The tympanic floor of the infant is slightly below the level of the nasal floor, while that of the adult is some 20 m.m. to 22 m.m. above the floor of the nose. The pharyngeal mouth of the infant canal is about the same level as the hard palate, which in the adult it is 10 m.m. above. It can easily be seen that the infantile tube has the physical characteristics which favor the entrance of germs and secretions from the nose and nasopharynx.

According to Gomperz,<sup>7</sup>

Other conditions, such as the following may account for the frequency of otitis media in infants:

1. The fact that the tubal ostia open into the nasopharynx.
2. The mechanics of birth cause circulatory changes, and therefore hyperemia and edema of the mucous membrane of the middle ear.
3. The fetal characteristics of the middle ear membrane which persist.
4. Immaturity of the new born.
5. Traumatic injury of the middle ear before and during birth, entrance of amniotic fluid and contained particles into the middle ear.
6. Coughing, sneezing, crying, vomiting, can introduce infection into the middle ear.

The author is particularly interested in this last statement, for his office records taken over a period of four years, 1923-1926, on 476 infants, contained such a history in almost all cases. One especial phase which he wishes to call attention to is sneezing. Close observation of many infants at the time of sneezing showed that the majority of them sneeze with their mouths closed instead of open, as an adult usually does, and hence mucous material is forced up the short, wide, open eustachian tube into the middle ear. It was interesting to note, also, that 354 infants under six months of age were the first-born in each family and so, nearly all had new clothing and blankets. New blankets are very linty, and commonly this lint is found around the external nares of the infant, and certainly acts as a foreign body which will cause irritation of the mucous membrane with subsequent results. One procedure so common among mothers is the cleansing of the nares with dry cotton, which also acts as a foreign body. The pernicious habit of parents and relatives dressed in street

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clothes, of holding, fondling, and kissing the infant certainly opens an avenue for nasopharyngeal infections resulting in otitis media.

According to the autopsy findings of Preysing<sup>3</sup> on one hundred children, less than three years of age, there were pathological changes in the middle ear in 81 per cent. In doing autopsies on children at St. Vincent's in Chicago, Sykes<sup>4</sup> was frequently surprised to find the middle ear full of pus, where no ante mortem diagnosis of such had been made. The tympanic membranes had disguised any symptoms of an otitis media which could have been recognized only by an otoscopic examination.

According to Marriott<sup>1</sup> and Tribble,<sup>4</sup> the invading organisms may be staphylococci or streptococci, particularly of the hemolytic strain. In my experience these two types have been the predominating organisms.

*Symptomatology.* The symptoms are much more variable than in the adult. In the infant the symptoms may be so indefinite as to be of little or no diagnostic value to the practitioner. The two types I noticed according to symptoms were:

1. The infant without elevation of temperature.

2. The infant with elevation of temperature.

Although the writers mentioned report temperature as almost a constant but variable symptom, I wish to report my findings on those without temperature, particularly on those under six months of age.

Total number of cases.....	476
Under 6 months of age.....	354 (74.5%)
Over 6 months of age.....	122 (25.5%)
306 of the 354 cases under 6 months were without temperature (86.3%).	

48 of the 354 cases under 6 months had temperature (13.7%).
64 of the 122 cases over 6 months were without temperature (52.8%).

58 of the 122 cases over 6 months had temperature (47.5%).
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By the term "without temperature" I mean a rectal temperature of 100°F or less taken every three hours during the acute course of the infection.

The greatest number of cases recorded were in 1926, showing an increase of at least 50 per cent. over any one of the other three years. To my surprise, the summer months first, and winter months second, showed as high as a 15 per cent. increase over the spring and fall seasons; also that the months of July and December

showed as high as a 20 per cent. increase over all other months. These statistics, therefore, lead me to believe that:

1. The season of the year has nothing to do with the prevalence of otitis media in infants under six months of age with no elevation of temperature.

2. That during the inclement weather of the fall and spring months the mothers do not venture to bring their babies to the office.

3. That many infections of long duration which appear in the summer months are carried over from the spring months.

The usual symptoms are that the baby cries immediately after feeding or at times stops and cries during feeding. His cry may be shrill, intermittent, harsh and painful, or just fussy; and after crying it out for a period of thirty minutes to one hour, he drops off to a sleep which usually is very restless. The time for his howling seems to run in cycles. Some cry all day and sleep at night, and vice versa. Some begin to cry at 6 or 7 a. m. or at 2 p. m., but most of them begin about 8 o'clock or earlier. After a feeding at 6 or 7 p. m. and a short nap, the infant awakens with a jerk, hands fly up over his head, and he is started for the night's party until midnight or after. Feeding during this time does not relieve him, only makes him worse. If picked up and rocked he may fall back into a fitful sleep which lasts only a few minutes, when he again jumps as if some sharp pain had seized him. Finally he may drop off to sleep from exhaustion. The acts of hiccoughing, sneezing, coughing, and swallowing seem to cause pain and increase his crying. Generally his nasal air passages are blocked, or his nose may be buried against his mother's body, which really is self-politizing by forcing air up through his eustachian tubes. How well do we adults know this if we have an acute ear and we are forced to cough, sneeze or blow the nose.

One other characteristic symptom which the mother notices and reports is that he continually rolls his head back and forth, and at times gets relief when his head lies close to his mother's warm breast or when her hand or a warm cloth is placed over each ear. Also she reports that he seems more comfortable in an upright position, which is natural, since that position affords the best drainage of the aural canal. The creaking



of the floor, the ringing of the telephone in an adjoining room, the dropping of articles, cause him to jump in his sleep only to awaken and start again. Then the mother complains she has a nervous child and tries to explain this by heredity, by her condition before birth, or the father's nervous condition. This type of case is soon diagnosed colic, hunger, or what-not; and feeding changes begin. Finally he comes to us with a history of a healthy baby at first, gaining until a change of foods was tried, breast feedings had been eliminated and yet nothing agreed. Usually the artificial foods were fed according to the directions on the packages, and his tolerance was broken for almost any kind of food. Frequently, however, we were fortunate enough to see several of them before feeding changes had been made. Then the infant was well nourished and physically a picture of health. My statistics show that 50 per cent of them were normal or overweight, and that these cases yielded a great deal better to treatment than others.

The mother may or may not give a history of the baby having a cold, but usually reports that he sneezes a great deal and occasionally spits up milk, and that he brushes his ear with his hand or pushes one finger into the canal.

*Examination.* Examination of ears show hyperemic tympanic membranes, one or both, particularly at the time of distress, but you may see him the next morning when both middle ears have drained themselves and the tympanic membranes look perfectly normal. A baby's crying increases the redness of his skin and mucous membranes, so as a matter of precaution, allow him to quiet down for a while by having him nurse for ten to fifteen minutes until the redness disappears. Another important factor to remember is that one ear may be affected one night and the other the next night, depending a great deal on which nostril is blocked. So it is with ourselves—one nostril may be blocked one hour, while an hour later that side may be clear and the opposite side blocked. If we lie down on our right side, the nostril on that side will be blocked and the left one open; so why would not the same be true with the baby that spends all his hours in a recumbent position, and is changed from one side to the other several times a day, thereby causing the drainage from the nose to flow over the orifice of the auditory

tube? Many times we have been able to predict from an examination of the nose which ear we would find affected.

As stated, the tympanic membranes may be red and many times we have found one red, not bulging, the other pearl gray and normal in color. Then others may show bulging particularly in the upper quadrant around the hammer. Comparison of these two membranes with one another on the same baby or routine examination of every baby's ears soon gives you a picture of the pathological ear. One important factor is to watch for cerumen on the tympanic membrane or in the canal. This obstructs the view; but if it is wiped out with a dry applicator, traumatic reddened tympanic membranes may be produced, thereby obscuring or misleading you in the diagnosis. Therefore, it is important that the cerumen be removed carefully with a small, well-oiled, loosely-made applicator. Further examination shows very frequently the mucous membranes of the nostrils inflamed and swollen, and the nasal passage partly or completely blocked on the side of the head on which the ear is involved. Mere handling of the external ear at times causes the baby to cry. Very often a small lymphatic gland appears behind the involved ear, or behind both if involved. Usually the case of long standing shows the enlarged lymphatic glands. These two factors alone can determine your diagnosis.

*Duration.* Frequently these cases have a history of the same symptoms for six weeks before you see them; and despite your treatment may last that long with one or both tympanic membranes bulging just as much as when you first saw them. Then you may decide to wait until the next day for another myringotomy, and he may stop crying that night for good, showing that the tube probably has opened and the middle ear has drained itself post nasally. My records showed that the average duration of each case was twenty-two days, and that the cases occurring in the month of September averaged five and a half weeks in duration.

*Differential Diagnosis.* First of all, we must stress the importance of using a good electrical otoscope in the routine examination of all babies' ears so as to keep ourselves constantly prepared to notice the pathological conditions.

Under this heading we must consider colic,

which as we know has been and will be for a long time a universal diagnosis for a crying baby. True it is that colic may run its peculiar cycle of time in the day and continue as long as otitis media; but the otitis baby cries while feeding and immediately after feeding, while a colicky baby will usually get some relief from warm food in the stomach. Enemas, given properly, do not relieve, but we know many times they do relieve colic. Such medicines as we might prescribe or those given by grandmothers and neighbors, such as catnip, fenel, etc., do not bring relief. Moreover, the regulation of his food to the best of our knowledge or the holding of him over his mother's shoulder to expel swallowed air is of no avail. But when warm phenol-glycerine, olive oil, or a myringotomy do relieve, we are forced to make a diagnosis of otitis media.

Hunger is probably second in importance, but many times our patient is gaining, is standard or overweight, and perfectly satisfied on his good days. The under-weight infant, no doubt, with his many changes of foods is hungry, although we must consider that it is natural for every baby in pain to suckle upon something, even the pacifier.

Such other things as safety pins, tight clothing, tiresome positions, or the possibility of his being spoiled, must all be considered before one arrives at a diagnosis.

*Complications.* The writers previously mentioned speak of the associated diarrhea conditions, but here I wish to speak of the stool changes in the cases without elevation of temperature. If the baby has had a bad night and finally gets relief from ear drops, invariably the next day the stools will be more frequent, mucousy, green, and often watery. This condition might the next day return to normal, provided he has a good night. However, the diarrhea may continue until a myringotomy is done. Usually this intensifies the condition the first day, but later it clears it up more rapidly. I believe that the reason for this is that any gentle irrigation after myringotomy may carry part of the contents of the middle ear through a re-opened eustachian tube into the pharynx, thence into the gastro-intestinal tract. With this diarrhea so universally recognized certainly we are justified in believing that our patient also suffers distress from a gastro-enteritis as well as from ear pains.

Because of the recent work being done on the change of the intestinal flora with acidified milks, I was interested to note that my bottle fed infants did a great deal better on lactic acid, buttermilk, and protein milk, than on other preparations.

Vomiting is also mentioned as a complication. My records showed that the frequency of this complication was even greater than one would suspect. The following case report might well be kept in mind:

Baby girl, four weeks of age, with projectile vomiting of breast milk immediately after taking, crying in pain after feeding; no elevation of temperature; green stools (probably in this case starvation stools)—and yet no visible peristaltic waves could be seen. A tentative diagnosis of beginning pylorospasm was made, but at the time of the second visit both tympanic membranes were bulging. An immediate myringotomy was done; the baby stopped its projectile vomiting at once and made an uneventful recovery.

Sinusitis has been shown during the last two or three years by Deane of Iowa City and Mitchell of Memphis to be more frequent than we had ever realized. This may also be a complication of otitis media, but on the other hand otitis media may be a complication of sinusitis. The frontal sinuses are not developed; but all others are present and may become infected, and do many times, but remain undiagnosed.

*Case Report:* Boy, three weeks of age; weight 4½ pounds; operated upon for strangulated inguinal hernia under ether anesthesia; developed a double otitis media in one week and many furuncles over the entire body. The furuncles required many lancements. Numerous myringotomies were done on both tympanic membranes with temporary relief each time. Furuncles cleared nicely with the help of the ultra violet ray. At the age of four months he was still having attacks of diarrhea and earache, requiring a myringotomy on the average of once a week. For a following period of two weeks his ear condition and diarrhea had disappeared and he was gaining nicely; when suddenly he began crying from pain which lasted for thirty-six hours, without relief from enemas, etc.; both ears normal in appearance; temperature 106 F. rectally; marked meningismus; chest and urine negative. But on examination of his mouth, we noticed a drop of pus which with pressure by the index finger could be expressed from the gum above the area of the upper incisor tooth on his left side. X-ray showed the left maxillary sinus to be cloudy. This area was drained and washed through the nose with immediate relief from pain; meningismus and the temperature returned to normal in four hours' time. This baby's ears have been nor-



mal for 1½ months; but on the average of once every two weeks he cries with pain, his temperature rises to 100-101 R., meningismus returns, and with an antrum drainage he gets immediate relief. He has been fed entirely on protein milk and at six months weighs 14½ pounds.

Meningitis, although not a frequent complication of otitis media, does occur, particularly in neglected cases. We have had six cases, seen in the beginning stages, giving a long history, but all died within a week after entering the hospital. Post mortems were not permitted.

Meningismus seems to be a rather frequent complication, especially in older infants, but it readily disappears with removal of the cause.

In accordance with Marriott's<sup>1</sup> opinion, we think we perhaps have had several develop mastoids which finally drained themselves with complete recovery. However, we have operated upon several others and have yet to find uninvolved mastoid or zygomatic cells. Our youngest case, five months of age, with double mastoid was operated upon with a complete recovery.

Periostitis may develop and is not an uncommon complication which must be treated accordingly.

Furunculosis of the ear canal is frequent, resulting from long drainage problems in the ruptured cases or in cases on which myringotomies have been done.

To date we have had no arthritic complications; but pyelitis especially and nephritis are very frequent sequelae. Tabulations of my records on this particular phase showed exactly the same number of cases in the infant under six months as the infant over six months of age, or 7% of the cases in each group developed some form of kidney complication.

#### TREATMENT

The treatment of uncomplicated cases resolved itself to medical and operative procedures. Two hundred sixty-six infants under six months of age were given medical treatment which consisted of instillation of warm phenolglycerine in varying percentages from 5-12% at 15 min. to 2 or 3 hour intervals. Applications of warm, wet, flannel cloths and instillation of olive oil, liquid petrolatum, or glycerine were also valuable adjuncts. Two important factors to be kept in mind are to leave the infant on its side long

enough for the warm oil to come in contact with the tympanic membrane and later to hold the patient in an upright position so as to help establish drainage through the eustachian tube. During the months when the epidemic became general, telephone messages to mothers advising the use of warm olive oil saved many a night call. Relief was usually very prompt the first time the warm oil was used because of the warmth of the oil. Such a result was valuable in convincing the parents that their child was suffering from earache instead of from colic. However, in the majority of cases there was very little post nasal drainage of the middle ear, and the distress would return later with all its symptoms. As to the routine usage of shrinking nasal drops, I am not yet convinced that this is a good procedure; for quite frequently any of these preparations will act as an irritant to the mucous membranes, and cause sneezing. Warm fresh air in the room is certainly advisable. Furthermore the co-operation of the parents in not changing the feedings, in keeping their infants at home and in continuing the warm ear drops, in time will usually bring permanent results unless other indications for surgical intervention appear.

Eighty-eight infants under six months of age were operated upon. The average number of myringotomies performed on each subject was four, while the largest number was eighteen. Our choice of incision is a semilunar posterior inferior myringotomy. The usual findings were serous or serosanguineous fluids, depending a great deal upon the types of the causative organisms. Rarely on the initial incision did we find pus, except in cases of long duration. A bulging of the superior posterior canal wall is of paramount importance in the diagnosis of a mastoid involvement.

*Drainage Problem.* Our choice for irrigation was either lysol, sodium bicarbonate, or boric acid solution, in the order named. Proper irrigation should keep the membrane from closing before the middle ear is dry. When the discharge was only serous, an alcohol wick of cotton or gauze kept in the canal and replaced twice daily under aseptic conditions gave surprisingly satisfactory results, thereby proving that some

infection must be secondary to external influences which cause the discharge to change to pus.

Since the chief object of this paper is the consideration of the infant under six months of age without an elevation of temperature, I am obliged to limit the records of our observations to a few case reports on infants over six months of age with an elevation of temperature. Most of these cases were associated with colds, but were more often found in cases of malnutrition and in those suffering from acute and chronic infections of tonsils and adenoids.

Case Report 1: Female, 7½ months of age, under weight, came in in a semi-comatose condition, with a history of a high temperature (106 R), frequent convulsions of seventy-two hours' duration, and a diagnosis of gastro-intestinal intoxication particularly because of an associated diarrhea. General physical examination was negative except for both ears showing a distinct bulging of the intensely reddened tympanic membranes. A myringotomy was performed on both membranes with a resultant discharge of thick pus. Temperature dropped to 100 R in seven hours, convulsions ceased, diarrhea increased in severity for twenty-four hours, but then cleared up rapidly; and the infant made a speedy recovery.

Case 2: Male, 9 months of age, weight 16 pounds; gave history of having tried many different kinds of food with none agreeing, vomiting quite frequently after feeding, frequent attacks of severe diarrhea, losing in weight, fussy but no shrill crying as if in pain. Rectal temperature ranging from 99 F to 102 F or 103 F daily, but no evidence of any cold. General physical examination revealed an underweight, malnutrition baby, with no signs of an acute abdomen, urine negative, both macroscopically and microscopically, but both tympanic membranes were pale and lusterless; no bulging or redness present. Because of the loss of the luster both membranes were incised revealing an abundance of thick yellow pus which continued draining for several days. As usual, the diarrhea increased for a few hours, later clearing up. Vomiting ceased immediately; the same food was continued and the infant began to make a steady, rapid gain in weight and became a happy, healthy, member of the family.

In our follow-up of a great majority of these cases, we have yet to find any single case showing impaired hearing.

#### CONCLUSIONS

1. Otitis media in infancy is far more prevalent than we previously have been led to believe.

2. Eighty-six and three-tenths per cent. of the cases reported herein were of infants under six months of age with no elevation of temperature.

3. The anatomy of the middle ear and its appendages in infants is conducive to infection.

4. Irritation of the nasal mucous membrane is an important causative factor in middle ear disease.

5. Our classification of otitis media in infancy is,

A. A positive fluid pressure in the middle ear which might be termed "hydro-oto-piesis" or water ear pressure.

B. A true inflammatory otitis media.

6. Undoubtedly the middle ear can drain itself by changing the position of the patient.

7. Early medical treatment by way of the external auditory canal will reduce the incidence of true otitis media and its complications.

8. Routine examination of all baby's ears is of paramount importance before arriving at diagnosis.

#### DISCUSSION

Dr. Robert H. Graham, Aurora: I am sure that Dr. Cline should be congratulated on this very exhaustive review of this subject.

He was kind enough to send me his paper several weeks ago and I can assure you that the complete paper was even more exhaustive than that which he gave here. Because of his limited time he did not give his complete paper.

To me one of the most important points he has brought out is the use of the otoscope. I believe that the routine examination of every sick child with the otoscope is most important. I think it is neglected in many cases where an examination of the ear drum would give very important findings.

I would like to ask him several questions in opening the discussion. First, the direct indication for the initial myringotomy and what would be his indication for subsequent myringotomy?

The statement that he used several myringotomies, an average of four, was rather startling. At the same time, I believe especially with otitis media in a child of six months, that usually our treatment is not sufficient. And if repeated myringotomy helps in the treatment of otitis media in children under six months, and that was the gist of the paper, it is well worth our discussion and attention. Another question regarding the removal of adenoids in a child under six months and one having repeated otitis media whether or not in his experience that would be justified.

Also I would like to ask if he makes any point of differentiation between an otitis media and a catarrhal otitis. That undoubtedly comes under the definition of an otitis media. In my own experience I have found that one or two myringotomies followed by boric solution irrigations by a competent nurse or



mother very frequently will keep an incision open and draining until the otitis media is cured or at least relieved for this attack.

I would like to ask Dr. Cline the percentage of his cases of otitis media in older children which have led to a mastoid involvement.

I would like to again compliment the doctor on his treatise of this subject and again emphasize the use of the otoscope in routine examinations of all children regardless of indications.

Dr. Irving I. Muskat, Chicago: In an examination of these children who have signs of colic, it is also sometimes very difficult to make a diagnosis whether or not they have an acute otitis media. In looking with the otoscope you may only find a slight redness which may be due to crying or possibly may come from some other source, as from pulling on the ear.

The diagnosis is often made by examining the pharynx of the child whereby one may see exudate of pus or serum from the pharyngeal orifice.

Regarding repeated myringotomies I believe this is often repeated because of the formation of a clot after the first one. We know that the membrane heals very rapidly and that the first clot should be washed out with peroxide immediately after the opening of the drum membrane.

Dr. Gerald M. Cline, Bloomington (closing): At this time I wish to thank Dr. Graham for his excellent discussion, also Dr. Muskat.

In answer to Dr. Graham's questions about the absolute indication for an initial myringotomy, I feel that a bulging ear drum which cannot be relieved by the use of phenol glycerine should be incised. Of course, the questions we have to face in doing this are: that none of us like to operate upon a small infant under 6 months of age, and second, that it is not the easiest thing in the world to obtain the parents' permission to do it. In many of these cases we feel in our own minds that we should do an immediate myringotomy when we first see them, but we send them home with phenol glycerine, which frequently relieves temporarily and consequently sells the idea to its parents that their child is suffering with earache. After the infant is relieved by the initial myringotomy we usually have little trouble in obtaining permission for the succeeding ones.

As to my indications for subsequent myringotomies, I feel that these cases will clear up more rapidly with repeated myringotomies than they will by the continual use of phenol glycerine. My records do not show this, for we do not have the opportunity to incise as many as we would like to. However, several cases that have had several myringotomies convinced me that they usually get quicker permanent results.

The removal of adenoids again brings up the question of permission from the parents and the fact that usually an infant is not the best surgical risk. We have taken out adenoids in several 9 months of age and an occasional one under 6 months of age where we were really forced to because of the nasal obstruction.

I did not have time to read our points on irrigation of these ears after the myringotomies. That seems to be the real question we are confronted with today. How can we keep these ear drums open long enough to drain out all the increased fluids? Irrigation, of course, by the mother is a hard problem for usually she is so worried and afraid that she is not thorough enough. One procedure we are doing is making an applicator wick of cotton soaked in alcohol and placing it in the canal immediately after the myringotomy. This is changed frequently by the mother. I believe this helps to prevent an external infection and also acts as a wick to facilitate better drainage. It must not be made too large so as to cause a blockage.

The percentage of mastoids complicating otitis media in older children, I think, varies a great deal according to the type of care given the involved ear. Adequate early drainage is certainly advisable.

As to the finding of pus in the nostrils and posterior pharynx, I have been watching for it. I think it is important to a certain extent from a diagnostic standpoint in older children of sinus infection, particularly the finding of pus underneath the middle turbinate which has drained out either from the ethmoid or maxillary sinuses.

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#### THE POSITION OF THE OPHTHALMOLOGIST IN THE MEDICAL PROFESSION\*

ROBERT H. BUCK, D.D.S., M.D., F.A.C.S.

CHICAGO

To observant men in the ophthalmological branch of medical practice, it is becoming increasingly evident that between ophthalmologists and their fellows in general practice there is a notable lack of that intimate relationship which should exist between all branches of the medical profession.

The exigencies of modern business and professional life demand a vastly greater use of eyesight, and this, too, under conditions of artificial

\*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Moline, June 1, 1927.

illumination. Advances in our knowledge of eyesight conservation have kept pace with these demands, while our researches into the underlying systemic causes of eye diseases have been unremitting and have been fraught with a full measure of success; unfortunately, our contacts with our fellow medical practitioners and through them with the laity have been sadly neglected.

It is true that we have gained recognition as an ultra-scientific branch of the healing art, but this has only served to place us in a position of austere isolation; a position in which we find ourselves divorced from that intimate contact with the ordinary every-day demands for our services as refractionists in which we are able to give a full measure of service to our fellow men.

In other words, we are rapidly coming to be recognized as a group of scientific research workers, basing our observations on our experiences in free clinics and catering only to cases requiring knowledge of pathological conditions and surgical skill.

This, at least, is the present day conception of many medical practitioners and of the public, as well. The consequence has been that astute commercially minded people have grasped the opportunity. They advance the argument that the fitting of glasses should be left to refractionists, and that only such cases as show symptoms of disease should be cared for by ophthalmologists. Such sophistries are being accepted even within the ranks of the medical profession.

*The fallacy of such argument becomes at once apparent when it is pointed out that no course of training short of a complete medical education suffices to qualify a man with the skill and judgment necessary to recognize the symptoms of incipient ocular pathology. In addition to this, he should possess a special knowledge of the eye, the most highly differentiated sense organ in the body if he is to make a proper application of the recognized methods of treatment, including the prescribing of glasses.*

A proper examination of the eyes should comprehend a thorough consideration of all the organs involved, not merely locally but remotely as well, and this requires all the knowledge of general medicine possessed by a fully qualified physician. Such an examination cannot be sat-

isfactorily made without the use of drugs. It should include a careful observation of the condition of the lids, tear sacs, conjunctiva, cornea, iris, lens and the size and reaction of the pupils. Tension should be determined, fields outlined, color vision noted, and muscular balance ascertained. A painstaking refraction should be made under a cycloplegic, if necessary, and last and most important, there should be a thorough ophthalmoscopic examination.

The early ocular manifestations of such general diseases as arterio-sclerosis, albuminuria, diabetes, tuberculosis, syphilis and focal infections, and such specific eye diseases as cataract, simple glaucoma, choroiditis, glioma, retinitis pigmentosa, papillitis, optic atrophy, choked disc and many others are not usually accompanied either by pain, diminution of vision, or any other external symptoms, and are revealed only by a skillful ophthalmoscopic examination preferably made under a mydiatic. By this means, the presence of incipient disease which has manifested itself in no other way is not infrequently disclosed and at a time when treatment will still avail for its correction.

The correction of strabismus requires a profound study and a clear comprehension of all the elements that enter into its etiology. This is, without doubt, one of the most difficult problems with which the ophthalmologist is confronted. It requires vastly more than an ability to refract, since many of these cases are in no wise due to refractive error, and even those cases which are amenable to such treatment require a full correction. The full correction for a refractive error in a child cannot be determined with any degree of certainty without the use of a cycloplegic. Then, too, such refractions are often required at a very early age when it is impossible to obtain the co-operation of the child, and a careful, painstaking retinoscopy under a cycloplegic is the only means of ascertaining the proper correction.

In the past, of all the specialties of medicine, ophthalmology was unique. Every medical student in his own mind was either a potential surgeon or internist, and as such, he felt the need of a diagnostic knowledge, at least, of all other specialties, because he realized that in practice his work would extend over into all other fields of medical practice save only ophthalmology.



Here he felt that he did not need even a diagnostic knowledge since he would refer all eye cases to an oculist, and consequently he expended a minimum amount of time and energy on the courses in ophthalmology, with the result that when he entered practice he possessed little or no knowledge of the requirements of a proper ophthalmic examination.

Thanks to the advances in modern medical curricula, this situation no longer obtains and the courses in ophthalmology now require a thorough grounding in the essentials of ophthalmic practice, including refraction, but it is left to the ophthalmological sections of the various medical societies to establish a closer relationship with the many medical practitioners who are apparently still unaware of the requirements of a proper eye examination.

To quote Fishbein, "The practice of medicine is considerably more than a profession or business. From its very nature, it is a powerful social agency for the upbuilding and uplifting of humanity. The desire to upbuild and uplift is inherent in every ethical physician who has a true appreciation of the real standing and importance of his profession."

Why then should the public eyesight, involving as it does the most valuable sense organ in the human economy, be left to the ministrations of, at best, indifferently qualified people, who know little or nothing of ophthalmoscopic findings in general diseases or of ocular diseases, who are not even permitted the use of drugs in their so-called examinations, and this, with the consent, if not the actual recommendation of enlightened physicians.

I might proceed to the citation of cases in which such recommendations were made and which resulted in partial or even total loss of vision through the inability of refractionists to recognize active eye diseases, since such instances are not infrequent in the practice of every ophthalmologist and especially in clinics, but time does not permit of such digression. Suffice it to say that far too many serious eye lesions result from the practice of fitting glasses to patients without a comprehensive eye examination to ascertain the presence of incipient ocular pathology.

A definite propaganda is just now being waged in medical circles to appraise the layman of the

advisability of regular physical examinations to determine the condition of his health. Surely, a proper eye examination constitutes an important part of such procedure. It is not sufficient that he be referred to a refractionist for the correction of visual error by the fitting of glasses. Eyesight conservation is becoming an increasingly important feature of modern ophthalmological practice. It concerns itself not alone with the care of ocular maladies after they have developed, but with prevention as well. The element of paramount importance in prevention of loss of eyesight is a thorough examination of the eyes during the course of a general physical examination or as soon as the first symptoms become manifest. Such symptoms include evidence of eye strain as observed by the physician or by the school doctor or nurse, and demand a comprehensive eye examination during the course of which the eyes are refracted and glasses prescribed if needed.

It devolves upon us as ophthalmologists to persuade our fellow practitioners that unless the patient be referred to an ophthalmologist qualified by a complete medical education and skilled in the use of the ophthalmoscope for a comprehensive medical examination of his eyes, the physician is not fulfilling his full duty to his patient.

The field of medicine is constantly being invaded by cults and irregular practitioners of all descriptions, and these people frequently contrive to gain legislative recognition. I do not wish to be placed in the position of an alarmist, for I am fully cognizant of the fact that throughout the ages cults have come and gone into innocuous desuetude.

The qualified physician has little to fear from such sources by comparison if he will bring his case before the intelligent public, but this demands publicity and such publicity should begin within the ranks of the medical profession.

Irregular practice of the healing art, if it has merit, tends to ultimate merger into the regular practice of medicine. Homeopathy, through forced increases in its requirements, has become so merged, and dentistry, through its increasing inclusion of the medical sciences in its curriculum, is well on its way to the same end. Optometry, with its demands for higher educational requirements and ethical standards, is already

recognizing its need for greater medical knowledge and will, no doubt, ultimately reach the same goal.

We, as ophthalmologists, already possessing a foundation of complete medical education and special training in ophthalmology, are not fulfilling our duty to the public. It is not enough to be good diagnosticians as well as good refractionists. We must go further. It is our duty to so disseminate a knowledge of the requirements of a comprehensive eye examination that every intelligent citizen will recognize the need for such examination and demand it from any man who essays the fitting of glasses to the human eye.

The ophthalmological profession will welcome into its ranks any individual who will fulfill these requirements and measure up to the standard.

In the foregoing paragraphs I have made an effort to set forth the situation as it now exists, together with the underlying causes.

The keynote for the correction of this condition is a campaign of education within the medical profession and through the physician, education of the public by the dissemination of a knowledge of the requirements of a proper examination of the eyes.

Such blank statements as that physicians should refer their eye cases to oculists for refraction, without giving definite reasons for so doing, are to no purpose. We must go out among our fellow practitioners in the branch and county medical societies and bring home to them the arguments for more comprehensive attention to the eyes.

The Department of Health of the City of Chicago recently requested a statement as to why the eyes of school children should be refracted under a cycloplegic. A committee consisting of five ex-presidents of the Chicago Ophthalmological Society compiled a reply, setting forth the reasons, and this was published in the *Bulletin of the Chicago Medical Society*. This was a constructive move in the right direction and might well be emulated in every community.

The sentiments expressed at the Annual Congress on Medical Education and Licensure of the A. M. A. in February, indicated the imperative necessity for greater unity of action within the profession, but no mention of ophthalmology or

its problems entered into the discussions. We are not a separate profession, but an integral part of the great medical organization, and as such, should take our place in its councils and obtain for ourselves the same co-operation and protection afforded to all other members. We are entitled to the whole-hearted support of the entire profession in combating not alone the insidious encroachments of men lacking the qualification of medical education, but also legislation inimical to the best interests of our patients, whom we are in duty bound to protect. We can only obtain such support by bringing ourselves in closer touch with our confreres.

Legislative committees have their place in this endeavor and every ophthalmological society should have one to co-operate with the legislative committee of the State Society, on which we should also be represented. But it is not sufficient for the individual ophthalmologist to see that such committees are appointed and then sit back in smug complaisance and "let the committee do it."

As Duane as so succinctly stated, "Hundreds of physicians are sending their patients to optometrists simply because they do not recognize the cardinal fact that refraction and medicine are intimately interwoven and that the functions of the eye cannot be dissociated from the functions of the body in general. We must educate the physicians and the public as well by widely diffused, well-prepared information."

30 North Michigan Boulevard.

#### DISCUSSION

Dr. C. A. Hercules, Harvey: I have been very much interested in this paper, because I have been watching with considerable interest the movement on the part of some spectacle men working especially in New York, and it looks as though in Illinois there would be some bills introduced into the General Assembly which would be in a measure inimical to our interests and the interests of the country at large. The optometrists were attempting to require certified eye-sight for automobile chauffeurs, train men and others, and I believe we ought to look into this, because I believe our Legislative Committee could do quite a good deal for us but I believe we will have to educate the general medical men to the fact that the oculist only is the man capable of making examinations of sufficient accuracy to have legal sanction and it is to the interest of the medical profession as a whole to help better serve the public in an educational and legislative way.

Dr. John E. Koons, Chicago: This subject is very



interesting in view of the fact that all the other papers have been scientific. Dr. Buck's correspondence with the Chicago Medical Society and the Chicago Department of Health are both instructive and educational, and should be read carefully by all medical men. It appears that the general practitioner in some cases needs the education along the lines pointed out by Dr. Buck in his paper. There is a condition that obtains a great deal in Chicago, which needs remedying, namely, the appreciable number of employers permitting spectacle peddlers to come in to their establishments to examine and prescribe glasses without a proper ophthalmological examination. I have had several patients recently, who were examined in that way, that did not need glasses, but needed medical attention to their eyes. The public are not gullible; educate them to the difference between the service of the oculist and others, and they will go to the oculist. The oculist should have more of the public consulting him when in need of glasses, and not only when they need medical attention to their eyes. Dr. Buck is to be congratulated in the way he has presented the facts in his paper, which should be given careful consideration by the medical profession.

Dr. Robert Buck, Chicago (closing): I have nothing more to say except to emphasize what I said before. I think the keynote to this situation is that the ophthalmologist must educate the general physician. Unless we can convince the physicians of our position, we cannot expect to do much with the public.

### GENERAL CARE OF THE PATIENT HAVING BONE AND JOINT TUBERCULOSIS\*

BENJAMIN GOLDBERG, M. D.

Member and Secretary, Board of Directors  
Director, School of Tuberculosis  
Municipal Tuberculosis Sanitarium

CHICAGO

Some years ago I happened to be resident physician for some time in the children's ward of a great charity institution. We had at that time on the hospital staff some of the best orthopedic surgeons in the country, and everything from a surgical standpoint that could be done for children suffering from bone and joint tuberculosis was being done. The hygienic conditions, however, were not satisfactory; the wards were overcrowded; there was not enough direct sunlight or fresh air; we did not have a violet ray apparatus; we did not have available the services of a trained dietitian or physiotherapist; the internist and pediatrician were not seen in the ward as often as might be. *In other words, the general*

*care, including such vital considerations as rest, diet, heliotherapy left much to be desired.*

In many institutions since I have noted this same defect—that many of the factors that enhance the skill of the orthopedic surgeon are lacking; that, on the other hand, in some institutions which have splendid facilities for heliotherapy, hydrotherapy, etc., no proper provision is made for adequate service from the orthopedic surgeon. The great desideratum should be to unite in one institution the skill of the orthopedic surgeon and the necessary personnel, apparatus and equipment to furnish all the adjuvant or helpful factors in the treatment of bone tuberculosis.

Recent work, both clinical and experimental, has demonstrated the very great importance of the feature of general care. Many men of considerable experience are today inclined to regard general care, with particular reference to the *features of rest, diet, and heliotherapy, as having almost as important, if not quite as important a place in the treatment of bone and joint tuberculosis as surgery.*

The x-ray specialist, the heliotherapist, the internist, the pediatrician, the dietitian, each, in comparatively recent years, has had much to offer in the treatment of bone and joint tuberculosis, particularly in children. The orthopedic surgeon of today realizes, better than any one else, the benefits conferred on his art by these special lines of research, and is glad to have at his disposal, whenever possible, all these adjuncts to surgical treatment.

*Rest, in the present state of our knowledge, is the single, most important therapeutic factor in the treatment of tuberculosis.* Rest is equally important in all forms of tuberculosis, whether the term be applied to the diseased lung splinted by means of a pneumothorax, or to the diseased bone or joint splinted or placed at rest by orthopedic appliances, traction, etc.

The objectives which we must have in mind in trying to gain the necessary degree of repose are clearly outlined. We cannot, however, always reach them with entire satisfaction. *The rest for the active case of bone or joint tuberculosis should be as complete, as consistent, as continuous (without injury to other tissues) as we can make it. It should be both general and local;*

\*Read before a joint meeting of the Chicago Tuberculosis Society and the Chicago Orthopedic Club, December 15, 1927.

*it should be psychical as well as physical, and should be patiently persisted in, if necessary, over a long period of time.*

We must, then, in applying the principles of rest to tuberculous processes of bone or joint, consider three elements—general physical rest, local rest, and psychic rest.

The patient with an active bone lesion should be in bed, in a state of general relaxation. Everything should be done to keep him in such a state of general physical relaxation. This is the field in which the nurse or the attendant relative must show her tact, kindness, and perseverance.

Local rest will be cared for by suitable apparatus applied by the orthopedic surgeon and frequently inspected to insure that it is properly fulfilling its function.

The third objective in the rest problem—psychic rest—is frequently much more difficult of fulfillment than either of the other two. Psychic rest or mental quietude produced by proper psychology is an essential, and unless it be present there can be no complete or satisfactory body rest. This question of mental quietude is very important in young children or in children inclined to be fretful. In walking through our present-day orthopedic wards, one is surprised to note how contented, happy, and still the little patients are. They rest easily, contentedly, remain immobile for long periods of time on a Bradford frame or other orthopedic apparatus, and their restful attitude and lack of fretfulness are the best compliments offered to the training and skill of the physiotherapists or trained nurses.

The child in the home can similarly be taught to relax, rest, and carry without complaint the load of its orthopedic apparatus. The mother or relative attendant can, with the advice and cooperation of the orthopedic surgeon, develop the same skill in the psychic management of the patient.

How long should a patient rest? This is at times very difficult to decide. We can do no better than follow Rollier's principle and allow no patient out of bed until there is disappearance of all symptoms and signs, and until the x-ray shows that recalcification of bone has occurred.

*Diet*, the next subject to be discussed, is co-equal in importance with rest. Osler, that old master of medicine, years ago pronounced the dictum, "Feed the patient up, the tubercle bacilli will be taken care of."

In discussing the etiology and course of tuberculosis we must, of course, take into consideration two factors—the Seed and the Soil. The seeds are the tubercle bacilli and since tuberculosis is, of course, a disease of bacillary origin, there can be no disease without tubercle bacilli. The seed is today practically ubiquitous and the soil, the human body, shows varying degrees of resistance or susceptibility to this seed.

As Osler states in his parable, "The Sower," the condition of the ground on which the seed falls is important and the quality, quantity, and proportion of food has very much to do with the condition of the soil. I have a definite feeling that there are certain peculiar defects in the "soil" which increase this susceptibility to disease. I have a feeling that frequently there is a lack of certain substances in the diet which weakens the chain of vital resistance and allows the germ to imbed itself and commence destruction of tissue. It has been my frequent observation that in children suffering with bone and other forms of tuberculosis there was a history of a diet poor, for instance, in calcium and phosphorus, that the children in question were given very little such food as milk or the leafy vegetables.

Three well-balanced meals a day, given at the regular dining period, are the basis for the dietetic treatment of bone and joint as well as other forms of tuberculosis. Individualism is the keynote of success. The food should be of the kind that the patient likes or is accustomed to, of good quality and a little more in quantity, if possible, than the average healthy child or individual of similar physique will take.

In addition to these primary diet conceptions the food should be rich in the various forms of vitamins, particularly the vitamins A and D. These vitamins A and D are especially useful in tuberculosis. Foodstuffs rich in vitamin A are such foods as kidney, beef heart, calves' liver, sweetbreads, whole wheat bread, cream, milk, butter, cod liver oil, and eggs; such vegetables as beans, beets, onions, peas, potatoes, spinach,



tomatoes, cabbage, carrots, cauliflower, Brussels sprouts, and lentils, and such fruits as peaches, oranges, pears and plums.

Foodstuffs rich in vitamin D are, first and most important, cod liver oil, which is very rich in the substance, then eggs, and such vegetables as lettuce, endive, and cress, and nuts of various kinds.

The following menu, modified to suit the individual case, has been used by me for years with very excellent results:

Soup: Cream or puree.

Fish: Fresh cod, halibut, bass, boiled with cream sauce or broiled. Fresh lake fish, boiled or broiled.

Meats: Chicken, turkey, lamb once daily. Small pieces of rare beef two or three times weekly. Calves' liver two or three times weekly.

Vegetables: All vegetables in abundance, especially carrots, lettuce, cabbage, string beans, tomatoes, and spinach.

Cheese: Any mild variety.

Desserts: Cream and egg desserts of all sorts, e.g. blanc mange, Bavarian cream, floating island, cup custard, junket, soft rice or bread pudding. Gelatine desserts made with little flavoring. Very little sugar in all desserts. Stewed soft fruits may be taken in good amounts, cooked with little sugar and are best taken with or after a meal—never before. Cream may usually be taken freely. *Very little sugar.*

Fruits: Oranges, orange juice, lemon juice, grapefruit, raspberries, and apple sauce.

Bread: Whole wheat.

Butter: Fresh butter or salt butter freshened by working it over in fresh water. *Six pats of butter daily. Two teaspoonfuls of cod liver oil three times daily.*

Drinks: Cream, cocoa, milk, and water. *Four glasses of milk daily.*

Cereals: Fine-grained varieties, well cooked, e.g., farina, wheatena, oatmeal, cream of wheat, etc.

Eggs: In all forms, except fried. *The yolks of two eggs each day in orange juice or in milk.*

This menu has three advantages that, in the first place, it is a mixed diet, unusually rich in vitamins. In the second place, it is a vitamin-rich diet that as regards most of the articles mentioned, is within reach of the average purse. In the third place, it contains many ingredients rich in both calcium and phosphorus, and, in addition, includes cod liver oil which has, as we know, a tendency to increase the absorption of calcium from the intestines. As regards the mineral content of the foods mentioned, milk, cheese, eggs, oranges, and the leafy vegetables are quite rich in calcium. Liver, mutton, beef, fish, and oysters are quite rich in phosphorus.

It is surprising to note how frequently, even in fairly well-to-do families, the diet is ill-balanced and consistently lacking in the proper amounts of practically, vitally necessary ingredients.

The patient with bone or joint tuberculosis, unless he has or develops an idiosyncrasy for it,

should take at least four glasses or a quart of milk daily. The milk should be taken slowly, preferably through a straw, and in small amounts at a time. If a patient states that he can not take raw milk, before we give up this important article of diet, we should try milk blended with other beverages, for instance, chocolate malted milk, egg-nogs, etc., or in some instances the requisite amount of milk may be used in cooking. Cream and butter are rich in vitamins and have an important place in the diet. The child will soon become accustomed to the six pats of butter daily on his bread or potatoes, and will as a rule take it without demur.

As regards cod liver oil, we try to insist that it be taken in one form or another in practically every case. If the pure oil is used, at least two teaspoonfuls should be taken three times a day. It may also be taken in the form of malt and cod liver oil, maltine and cod liver oil, or even in capsules. Much better than the capsules is a form of standardized tablet recently on the market, containing the extractive and vitamin element of cod liver oil. Many patients find it easy to take cod liver oil with orange juice. With the oil sandwiched in between two layers of the orange juice, much of the objectionable taste is removed and some patients take it quite easily.

The main consideration is to assure one's self that the patient receives a cod liver oil preparation high in vitamin content. Pharmaceutical houses recently are devoting considerable research to the standardization of cod liver oil preparations according to definite vitamin content. This is an interesting branch of study and probably will be still more productive of good results in the near future.

Cod liver oil, as stated, is particularly rich in vitamin D, and is one of the most potent, or even the most potent, of the vitamin-rich foods. Experiments during the past several years have indicated that consequent on the taking of cod liver oil, calcium and phosphates, which are so essential in the healing of tuberculous lesions, are taken up from the small bowel in markedly increased quantities. For instance, Bergeim<sup>1</sup> finds in experiments reported in the *Journal of Biological Chemistry* in 1926, that animals given

1. Bergeim, Olaf: Intestinal Chemistry, *J. Biol. Chem.* 70:35, 1926. The Absorption of Calcium and Phosphorus in the Small and Large Intestines. *J. Biol. Chem.* 70:51-58, 1926.

cod liver oil showed a positive calcium balance throughout the intestines, and that the animals showed a considerable degree of calcium absorption from the small intestine.

According to Sherman,<sup>2</sup> the average calcium requirement is ".45 gram per day." This calcium is taken into the body either in organic forms such as cereals, yolks of eggs, milk, leafy vegetables, or as inorganic salts chiefly in drinking waters as carbonates, sulphates, and phosphates.

The whole subject of calcium and phosphorus, metabolism and mineral balance in general is still wide open for discussion and offers a fruitful field for research. We must, however, try to "guess our way" towards the maintenance of a calcium equilibrium and with this consideration we must, for the present, consider a calcium-rich diet an essential. In addition, we must include cod liver oil and other vitamin D rich foods which seem to favorably influence the absorption of calcium and phosphates from the small bowel. Finally, we must not forget that treatment with the ultraviolet ray has a marked influence in increasing the absorption of these valuable substances, and this brings us to the consideration of our next principle in the treatment of bone and joint tuberculosis—Heliotherapy.

*Tuberculin.* However, before coming to the subject of heliotherapy, it may be wise to say just a word concerning tuberculin in the treatment of bone and joint tuberculosis. Considerable difference of opinion as to its efficacy in these conditions exists both amongst orthopedic surgeons and amongst clinicians. Some men, as Twinch,<sup>3</sup> find that the period of treatment is much shortened and recovery more favorably established if tuberculin is used. Others show no appreciable difference in the results and find that the type of case improving under tuberculin would improve just as fast and just as permanently without tuberculin.

If tuberculin is used, it should be used with caution and within a point of reaction, and,

therefore, of tolerance. If a reaction unfortunately should occur, the next dose should be reduced to one-tenth or even one-twentieth the amount. The tuberculin treatment should not be considered by any means a specific, and all other factors, both of local and constitutional treatment, should continue in force.

*Heliotherapy.* We have still very much to learn concerning heliotherapy. We know that it has certain influences on metabolism; that sunlight which is necessary in the processes of plant metabolism is, doubtless, just as necessary in many of the processes of animal metabolism; that heliotherapy causes certain definite chemical changes within the body; that, for instance, it lends the body greater power in absorbing, through the intestinal tract, such essential substances as calcium, phosphorus, etc.; that it increases the hemoglobin content of the red cells; that it has a very definite action on the skin, causing hyperemia, an increase in the sebaceous or sweat glands, and later, on successive dosage, pigmentation in various degrees.

This is comparatively very little, and as a matter of fact, we must confess that we know very little indeed concerning the physiological effects of sunlight on the animal organism. We do know, however, empirically and as the result of years of experience at the hands of trained and careful men, that sunlight treatment under suitable conditions and under suitable supervision, exerts a very favorable influence on many types of bone and joint tuberculosis.

From personal observation and personal experience extending over a period of some fourteen years, I can not help but feel that heliotherapy and that type of artificial light therapy which supplies an almost perfect reproduction of the ultraviolet and of the solar spectrum, has a definite place in the treatment of extra-pulmonary tuberculosis, particularly tuberculosis of the bone.

*Psycho-Therapy and Sun Cure.* How much auto-suggestion or psycho-therapy is involved in the sunlight treatment? Even the popular song writer has always emphasized the association of sunshine and happiness. Perhaps we can sum up the whole question in a quotation from Rollier:<sup>4</sup> "Anyone who has seen the splendor of a

2. Sherman, H. C.: Mineral Elements in Nutrition with Special Reference to Calcium and Phosphorus. *Am. J. Pub. Health*, 14:513, 1924.

3. Twinch, S. A.: Rational Treatment of Bone and Joint Tuberculosis. *J. Orthop. Surg.* V. 16, No. 9 p. 295, September, 1918.

Twinch, S. A. and Stahl, Alfred: Tuberculin in Bone and Joint Tuberculosis, *J. Orthop. Surg.* March, 1920.

4. Rollier, A.: Heliotherapy, Oxford Medical Publications.



typical winter's day in the Alps, with its brilliant sunshine, and cold air, will realize what a stimulating effect it has." The sun is the symbol of hope and hope tends to happiness and cure. The old saying, "The hope of health returns with the sun," explains, perhaps to some extent, the feeling of exhilaration and pleasure which we experience on a clear, sunshiny day.

I am by no means trying to minimize the influence of the sunlight per se. We must, however, not lose track of the other adjuvant factors associated with "Sun Cure"—the good food, the beauty of a mountain climate, the association of children that tend to make each other happy (some laugh and make the others laugh), the influence of moving air striking the bare skin (which I will discuss later)—in other words, we have in "Sun Cure" under the best circumstances an entirely new environment with an association of new and powerfully influencing environmental factors.

The influence of moving air on the body, which I am convinced exerts a very favorable associated influence, deserves a special word. We find in examining patients under heliotherapy that, as they go along the path towards recovery, they accumulate weight, that their tissues, in spite of inactivity, do not become soft and flabby, but develop a resistant, firm feel. This good muscle development and fine tissue tonus is apparently the result of the friction of moving air as it strikes the body. The physiological result of a cool breeze may be readily appreciated. It exercises, undoubtedly, a markedly tonic influence on the skin and superficial musculature and probably, at the same time, stimulates the nervous system so that there is a tendency to good tonus in the muscles and superficial structure. This combined tonic influence of the moving breeze and sunlight is more marked at the higher altitudes.

In addition to this tonic influence, it is also reasonable to suppose that the cooling of the surface of the body by the breeze does away, to some extent, with vascular congestion on the exposed surface, and allows of more penetration and absorption of the necessary rays. This will be in line, of course, with the sunlight treatment of lupus, in which the best results are obtained after a "pressure anemia" is produced on the exposed surface.

To simulate the result of moving air, a ventilating or breeze-forming apparatus has been devised in connection with the sunlight apparatus. In the special apparatus for ultraviolet treatment being planned for the Spalding School for crippled children, we are paying particular attention to this breeze-forming feature and we feel that the results will be unusually satisfactory. Another very important feature of this new apparatus is that by means of it thirty to fifty children may be treated at one time. The advantage of this "mass treatment" is obvious.

*General Considerations.* Sunlight treatment may, of course, be obtained in two ways. One, through the medium of the natural source—the sun; two, through the medium of apparatus for the production of so-called artificial sunlight.

A few considerations first on the subject of direct sunlight. If the climate is suitable and we can have sufficient daily exposures all the year around, we may, of course, expect excellent results. In many parts of this country, however, the yearly average of possible sunshine is less than 50 per cent. During December, January and February, particularly, in certain districts, we have little to expect from old Sol.

On misty or cloudy days, the ultraviolet rays are largely or completely screened out, so that treatment by direct exposure is of little benefit. As a rule, in this country, we must depend on combined treatment, availing ourselves as much as possible of direct sunlight, and resorting to "artificial sunlight" when we believe that the amount of exposure otherwise would be insufficient, using also "artificial sunlight" for its greater concentration in the treatment of certain local lesions.

*Apparatus for Artificial Sunlight.* There are three types of apparatus for the production of "artificial sunlight" in common use in this country.

1. The mercury vapor lamp.
2. The carbon arc light.
3. The Tungsten filament ultraviolet lamp.

*Technic.* The duration as well as the extent of exposure is of first importance. The dosage of ultraviolet rays should be mathematically regulated according to a fixed scale. The scale for exposure should be written out and handed to the nurse or attendant and followed with religious precision. The one generally used is

based on Rollier's conception and has as its principle daily exposure of gradually increasing intensity.

In certain seasons and on certain days, owing to cloudiness, and in cities on almost any day owing to dust, there is a screening out of a considerable percentage of the ultraviolet rays. Few climates can boast the clear, intense sunshine of the Alps. The intensity of the sunlight varies, as said, from day to day, and this variant in the percentage of ultraviolet dosage present is one of our great problems. Quite recently an apparatus has been devised which will estimate, with a fair degree of accuracy, the intensity of the sunlight, or, in other words, the amount of ultraviolet or therapeutically potent rays present. This instrument will affect the scale directly in that it shows automatically to what degree the duration of exposure, as shown by the scale, should be shortened or lengthened on a particular day or at a particular hour. This new apparatus, therefore, used in conjunction with Rollier's scale, will enable us to regulate our heliotherapy dosage with a fair degree of precision.

*The Scale.* On the first day, for instance, the feet only are exposed and for five minutes. This five minute exposure is given three times a day. On the second day, the feet are exposed for ten minutes and the legs below the knees for five minutes. This exposure again three times a day at about one or two hour intervals. On the third day the feet are exposed for fifteen minutes, the legs for ten minutes, and the thighs for five minutes three times a day as before. The exposure is gradually increased until the whole body, except the head, is exposed to the sun for as long as two hours daily.

A written chart or program should be handed the nurse or attendant, covering the exposure to be permitted over a certain period of time. An excellent idea of the form of this chart may be had by consulting the chart in Rollier's<sup>4</sup> book, page 23.

*Hydrotherapy.* Hydrotherapy also has its field in the treatment of bone tuberculosis. A sponge bath after the heliotherapy exposure is refreshing and stimulating. The cold or hot douche or shower also has its indications.

*Precautions.* Even when using the scale, it is

essential that great caution be used. Some individuals, particularly blondes, are quite susceptible to the influence of sunlight and should be watched carefully. Extreme reddening, blistering or burning of the skin should be, by all means avoided. Constitutional symptoms such as considerably increased pulse rate, signs of dizziness, rise in temperature, nausea, or discomfort, should be avoided, or if they do occur, precautions should be taken against their recurrence. Effects quite similar to the symptoms of a constitutional tuberculin reaction are occasionally noted. It should be the aim to cause a steady and gradual increase in pigmentation, from slight reddening to a light brown, darker brown, mahogany brown, and, finally, almost to a black.

The sunlight treatment in bone tuberculosis should be administered only under the direct supervision of the orthopedic surgeon. Even though the orthopedic surgeon today has grown rather conservative in operative measures in bone tuberculosis, he must, nevertheless, be in close touch during the entire period of treatment in order to anticipate, prevent, or minimize possible deformity. Much can be done in this direction during certain stages of the disease; at other stages again the most favorable moment has passed, considerable damage has occurred, and, in comparison, but little can be done. Time, tide and the best moment for orthopedic interference wait for no man.

104 S. Michigan Ave.

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## WHERE IS THE FAMILY DOCTOR AND WHAT IS THE MATTER WITH THE PUBLIC?

S. J. McNEILL, M. D.,  
CHICAGO

Meditating over the advance of civilization the question arises "where is the family doctor?"

The answer would seem to be that he is gone almost beyond recall. His fall in popularity seems to have been a portion of the aftermath of the unparalleled rush of the advancement of science in all its branches, and promulgation of new theories, and along with this phenomenal growth of knowledge, a crop of tares, such as cults and quackeries of every conceivable brand. And the thought arises that perhaps theories and



aims have gone at too rapid a pace, and that in skipping by the highways and hedges we have become blind to the pitfalls and mistakes along the way.

There was a time when the family physician, dressed in his frock coat and silk hat, driving a beautiful pair of dapple gray horses, came majestically down the avenue, when it seemed as if the whole neighborhood ceased activity to pay homage to the honored gentleman and his profession; he was their advisor, counselor and friend, holding sacredly their confidence. His human understanding seemed to draw him so near to the heart of the family that as I look back on this "word picture," I cannot help but think how closely the portrayal is to the song of the Sunday Schools, "The Great Physician now is near." The doctor would enter the home, revered and respected, his every wish and judgment acquiesced, for his advice and dictation was paramount and the family he was caring for had all confidence in his ability as a doctor. No one would dare suggest; there was no neighborly interference; the doctor's word was law. If the doctor felt a consultant necessary he did the calling in of his colleague. If the nursing was more difficult than the family could manage, a nurse was obtained. She was an angel in disguise who cooperated with the doctor and helped dispel the woes and anxiety of the family and patient. When the patient was well and time for settlement at hand, the family felt it a privilege to pay such a just and honest debt, the bill for which was rendered at the end of the month. In due manner the settlement was made. In addition to the doctor's bill there was probably only the consultant's fee and a weekly fee to the nurse of twenty-five dollars. Members of the family were life long friends of the doctor who had given of his time, knowledge, services and skill so wisely as to have made possible the recovery of some dear one. This is the picture of "Way back when."

Now I shall try to portray a picture of today in the humorous words of the cartoonist of the *Chicago Tribune*, "Something ought to be done about this."

We must battle today for much in the every day life of the so-called general practitioner. If a patient needs attention the family doctor is called, examines and diagnoses. If the case

proves to be something of a serious nature with a consultation advisable, the family doctor's wishes are not always respected in choice of a consultant. Relatives and neighbors step in and recommend "Doctor So and So," who is a specialist in "such and such" a disease. He may cooperate with the family doctor and he may be ethical, but the "professors" recommended by friends and neighbors is not always the honest, fraternal man who would be called if left to the discretion of the physician. Often the physician is told it will not be necessary for him to come again, that "Professor So and So" has taken the patient in charge.

Picture yet another scene. Patient is suffering from some intricate symptom. An internist is called. He recommends a surgeon. There may occur a throat involvement. Another bill is added by calling a nose and throat specialist; consultations and bills accumulate at such a rapid degree that the family are not only floored with the enormity of the expenses but often financially embarrassed. Added to this are the nurses, whose fees at the present time for twelve hours of duty are such that only the wealthy can afford this comfort, without utter hardship resulting.

The specialists must be paid for neighbor "So and So" recommended them. Nurses must be paid, this being an unwritten law. But, when the family physician renders his bill it is allowed to stand for "other expenses must be taken care of." The excuse generally is "Oh well! Doctor has so many patients he will not miss our check. He looks prosperous, drives a nice car, family is well dressed, so we will just stand him off." When the patient is well and looking at the world through "Rose Colored Glasses," the family physician and his bill of three or five dollars per call floats off into oblivion as far as this type of patient is concerned. The amount of the bill is used up in postage and perhaps the account lost in the evolution of time.

There is the patient who is always asking for a "Cut Rate," and the "Extended Payment" plan patient. So the world goes on and with it the problem of the family doctor.

In a few words of summary I am going to state my theories or answers as to why more young men entering the field of medicine shy clear of being "A General Practitioner." I feel

that every interne leaving hospital schooling should enter the general field for from five to fifteen years until there has been obtained a thorough and understanding knowledge of every phase of the anatomy and its eccentricities and not confine acquisition of knowledge to only one branch of the profession. Otherwise the young doctors are not only limiting their own knowledge to a very meager degree, but are helping to create some of the trials of the profession today, by having at every beck and call to consult with a specialist of some other part of the anatomy foreign to his own specialty.

It would seem that the public itself and politics are responsible for much of the grievances of the profession today. Lack of respect for the profession is brought about by modern times. The doctor must be "Hail fellow well met," and be addressed as "Hello Doc." This condition it seems is all right until the bill is rendered and then the family or head of the house avoids the doctor at every turn for fear the subject of finances might be forthcoming.

The cost of living is a hundred per cent higher now than it was in pre-war days. Taxes are quadrupled. Medical protection is more greatly needed by the doctor than at any time within history. Office rents are out of sight. New scientific appointments must be installed and the latest medical histories must be purchased. A high grade car is essential. Tires wear out. Gasoline must be bought. So, too, have the lay public their added expenses, but so often the luxuries are indulged in and little set aside for the proverbial "rainy day," when illness enters the home and provision is lacking. Who suffers from the lack of thrift? The family doctor.

Naturally according to the ethics of his profession a physician will care for a sick man first and take care of his bill afterwards. This is all right for the sick man, and for humanity, but it is bad for the community and bad for the physician and in the end bad for the sick man. Such a vicious circle naturally leads a competent man to abandon the field of family practice for that of the better cared for but only fifty per cent. as frequently necessary, "specialist."

Lady: Billy Sunday is marvelous. He has already converted thousands since he started preaching.

Gent: He isn't in it with Henry Ford. He shakes hell out of millions every day.

## NO CONFLICT BETWEEN SCIENCE AND RELIGION

"This much I can say with definiteness—namely, that there is no scientific basis for the denial of religion—nor is there in my judgment any excuse for a conflict between science and religion, for their fields are entirely different. Men who know very little of science and men who know very little of religion do indeed get to quarreling, and the onlookers imagine that there is a conflict between science and religion, whereas the conflict is only between two different species of ignorance."—*Robert A. Millikan (Collier's)*.

## VALUE OF WALKING

Wood and Dansill (*By-Ways to Health, 1925*) say that walking simply for health is monotonous, uninteresting and often defeats the purpose for which it is taken. Walking which leads to a wholesome interest in other things helps to build the body mind and spirit; helps to make of them that which is efficient, worth while and prepared. Walking is not a panacea for all ills, a harbor for all times of stress. But so far as exercise can help to cure or to comfort, walking holds for many individuals a measure heaped up and running over.

## TOO MUCH FOR SAM

"Mandy, honey, whar yo' all gwine?" questioned Sam.

"Oh, ahs jus' gine down yeah to de photo place to get mah miniatuah painted!"

Sam scowled disapprovingly. "Now, Mandy, look yeah," said he, "Yo' all am come to de limit an' ah ain't gwine stan' fo' no moh such doins. Fust off, yo' went to paintin' yo cheeks an' ah stood fo' dat. Den yo' painted yo' lips, and ah didn't say nuffin.' Den yo' paint yo' knees. But ah'll be dawg-gone if ahs gwine stan' yo' habbin' yo' miniatuah painted."—*Collegiate Wit*.

Dentist—What kind of filling do you want in your tooth, son?

Boy—Chocolate, doctor.—*Med. Life*.

## Society Proceedings

### ADAMS COUNTY

January 7, 1928, was the regular monthly meeting of the Council, held at noon at the Elks' Club, and all of the members of the Council were present, Drs. Baker, Cohen, Ericson, McReynolds, Swanberg and Irwin.

A motion was carried that the minutes of the December council and annual business meeting be approved as published in the BULLETIN. The probability of the American College of Surgeons holding its state meeting in Quincy this fall was discussed, and inasmuch as the completion of the new additions to the hospitals by that time was quite uncertain, a motion was carried that the Secretary be instructed to write the American College of Surgeons requesting that the meeting not be held this



year in Quincy, due to the fact that we would like to have them visit Quincy when they would have an opportunity to inspect the completed hospitals. Dr. Center brought up the advisability of this Councillor District holding a meeting in Quincy and stated it would be very desirable if this could be arranged in connection with some Adams County Medical Society affair. The Secretary made a motion that the society cooperate with our Councillor in regard to a Councillor District meeting, this to be held in connection with our annual picnic next June. Seconded and carried. The Secretary then presented a proposition whereby the Adams County Medical Society could assist its membership in the matter of professional collections. This would in no way interfere with the splendid work the Associated Credit Bureau is doing to furnish credit information. A motion was carried endorsing the proposition and recommending it to the society for adoption. Dr. Baker invited the Council to meet at his home at its next monthly meeting on the Friday evening preceding the day of our scientific meeting.

The meeting adjourned at about 1:45 P. M.

January 11, 1928, the annual social meeting of the society held at the Elks' Club at 7:45 P. M., was attended by members with their wives and visitors to the number of 55. The meeting was in charge of the Entertainment Committee, consisting of Drs. Grant Irwin, chairman, Warren Pearce and Earl Caddick. At the conclusion of the dinner Dr. Irwin made a few remarks and then called upon the President of the Society, Dr. W. H. Baker. Dr. Baker asked for expressions from Dr. D. M. Knapp and Mrs. Nettie McReynolds, both of whom responded in a delightful manner. This was followed by dancing and cards, the Malambri Orchestra furnishing the music. Adjournment was not made until midnight and everyone present expressed themselves as highly delighted with the evening's entertainment.

HAROLD SWANBERG, M. D.,  
Secretary.

### CHRISTIAN COUNTY

The Christian County Medical Society met in regular session at the Country Club of Taylorville, January 17, with about half of all the physicians of the county present at this meeting.

After a good dinner the business part of the program included the election of officers for the new year, which resulted as follows:

Dr. W. H. Mercer of Taylorville, president; Dr. Louie H. Miller of Pana, vice-president; Dr. D. D. Barr of Taylorville, secretary-treasurer; legal committee, Dr. J. N. Nelms of Taylorville; public health committee, Drs. J. F. Miller of Palmer and W. H. Mercer, Taylorville; censors, Drs. Lawler, Mercer, and Nelms of Taylorville; delegate, Dr. G. L. Armstrong, and alternate, T. A. Lawler, each of Taylorville.

Dr. Lowell D. Snorf of Chicago was the speaker of the evening and he gave a fine lecture on "Treat-

ment of Ulcers of the Stomach and Duodenum," and many were the questions and comments on his address. After the discussion Dr. Snorf was elected associate member of our society, as an appreciation of his effort to give up his time and talents in this address.

Dr. T. A. Coyne of Assumption was elected to membership.

D. D. BARR, Secretary.

### COOK COUNTY CHICAGO MEDICAL SOCIETY

*Regular Meeting, January 4, 1928*

Medical & Dental Arts Building, Fifth Floor  
8:30 P. M.

Telephone Central 3026

1. Toxemias of Pregnancy—John O. Polak, Brooklyn, N. Y.

Discussion—Jos. B. DeLee, David S. Hillis, N. Sproat Heaney, Joseph L. Baer.

2. What the X-Ray Picture Tells Us in Case of Syphilitic Diseases of Visceral Organs—Franz Groedel, Bad Nauheim, Germany.

*Regular Meeting, January 11, 1928*

1. The Dietetic Control of Obesity—Robert Keeton. Discussion—Wm. H. Welker, Prof. of Physiological Chemistry, University of Illinois.

2. The Early Diagnosis and Prognosis of Carcinoma of the Uterus—Henry Schmitz.

Discussion—Carey Culbertson.

*Joint Meeting Chicago Medical Society and Jackson Park Branch, January 18, 1928*

1. Investigation of the Sterile Couple—Irving F. Stein.

Discussion—Victor Lespinasse.

2. Cardio-Vascular Syphilis—Chas. L. Mix.

Discussion—A. A. Goldsmith.

*Symposium on Psychoneuroses: Their Nature, Causation, Diagnosis and Principles of Treatment, January 25, 1928*

1. Hysteria—Hugh T. Patrick.

2. Anxiety Neurosis—Meyer Solomon.

Discussion—Lewis J. Pollock, Ralph C. Hamill.

### IROQUOIS COUNTY

The Iroquois County Medical Society met in regular session at the Iroquois Hospital, Watseka. Dinner was served at six o'clock. The tables were appropriately decorated with the idea of the Christmast season and everything served appetizingly by Miss Johnson, the Superintendent.

Invitation had been extended to the Ford County Society to meet with us, put on the program, and partake of our eats.

President Gibson called the meeting to order. There were no minutes of the previous meeting, as that meeting had been devoted to the Annual Health Examination of the members by its members.

Dr. Boshell of Melvin was introduced as the speaker of the evening, who read a very interesting

paper on "Influenza." This brought on considerable discussion, led by Dr. Kelsheimer of Paxton and joined by practically every member present. Dr. Boshell closed the discussion.

By motion duly made and seconded a vote of thanks was extended the speaker and visiting Ford members for their program.

Election of officers for the ensuing year was then taken up and following members elected unanimously:

President, Dr. J. L. Shawl, Onarga; vice-president, Dr. F. A. Johnson, Onarga; secretary and treasurer, Dr. C. H. Dowsett, Watska; cencor, three years, Dr. G. W. Ross, Watseka.

Motion made and duly seconded that dues be raised to \$12.00. Carried unanimously. Meeting adjourned.

C. H. DOWSETT, Secretary.

### WARREN COUNTY

The regular meeting of the Warren County Medical Society was held in Monmouth at the Elks Club on Thursday, January 12, 1928. The meeting began at 3:30 p. m. with the following program:

Dr. Henry E. Irish, Associate Professor of Pediatrics, University of Illinois School of Medicine, Chicago, talked on "The Prevention of Heart Disease in Children." This was a very interesting talk, covering the subject thoroughly, and received an interesting discussion.

Dr. Charles M. McKenna, Professor of Genito-Urinary Surgery, University of Illinois School of Medicine, Chicago, gave an illustrated talk on "Renal Tuberculosis. Dr. McKenna had many unusually interesting slides to illustrate the many features and complications of this interesting condition.

The third speaker was Dr. Aaron Arkin of Chicago, who talked on the "Differential Diagnosis of Respiratory Diseases." This was also illustrated with many interesting slides on the subject. Dr. Arkin spent several years in intensive work in Vienna, and many of the slides were made from cases seen in the hospitals in that city.

Dinner was served to the members and guests at 6:30 p. m. and a short dinner program was arranged by Dr. Harold M. Camp, who acted as toastmaster.

The regular election of officers was held, and Dr. H. S. Zimmerman of Cameron was elected President, and Dr. Chas. P. Blair of Monmouth was re-elected Secretary and Treasurer.

The Warren County Medical Society has the unique distinction of having in its membership every practicing physician in the county, and all but two were present at the meeting.

The total attendance at this meeting was 85, although weather and road conditions were not at all favorable. Quite a number of visitors came one hundred miles or more to attend the meeting.

Plans are now being made for the Annual Tri-

County (Warren-Knox-Henry) Society Meeting which will be held in Monmouth next Fall. It is planned to make this biggest meeting of its kind that has ever been held in Illinois.

CHARLES P. BLAIR, M. D.,  
Secretary.

### WINNEBAGO COUNTY

The election of officers of the Winnebago County Medical Society for 1928 resulted as follows: President, Dr. W. L. Crawford; vice-president, Dr. John Jorter; secretary and treasurer, Dr. King G. Woodward; censors, Drs. E. E. Ochsner, H. R. Wormley and Warren Ives; delegates, Drs. Edw. Weld and T. H. Culhane; alternate delegates, Drs. Arthur Pearman and King Woodward; medical adviser, Dr. Daniel Lichty.

We also have established our own Credit Rating and Collection Bureau which is controlled by the Medical Society.

KING G. WOODWARD,  
Secretary.

### Marriages

AUGUST HENRY ARP, Moline, Ill., to Miss Elsa Mauritzson of Rock Island, Dec. 26, 1927.

CHARLES EMERSON SOULE to Mrs. Opal Fern Fry Cameron, both of Beardstown, Ill., Nov. 22, 1927.

### Personals

Dr. Casey A. Wood has been elected to life membership in the American Academy of Ophthalmology and Otolaryngology.

Dr. Lewis C. Messner, Potomac, celebrated his eighty-third birthday, recently, with a dinner at his home attended by about sixty friends.

Dr. Clayton E. Woodward has been named president of the staff of the Decatur and Macon County Hospital, Decatur, for the ensuing year.

Dr. Carl A. Hedblom addressed the Chicago Society of Industrial Medicine and Surgery, January 9, on "Traumatic Surgery of the Thorax."

Dr. Charles E. Shultz has tendered his resignation as city health director of Bloomington in order to accept the superintendency of Fairview Sanatorium.

Dr. Charles A. Elliott, Vice President of the American Medical Association, has been appointed a member of the board of governors of the Northwestern University Foundation.

The Chicago Laryngological and Otological Society was addressed, January 9, by Dr. Joseph



C. Beck on "Management of Malignant Diseases in Otolaryngology."

Dr. Sam A. Thompson, Mount Vernon, was elected president of the Association of Surgeons of the Chicago and Eastern Illinois Railroad at a meeting in Chicago in December.

Dr. Rudolph W. Holmes has informed the secretary of the Chicago Medical Society that he is retiring from practice; the council of the society voted to place Dr. Holmes on the retired membership list.

About 100 physicians of Peoria and surrounding cities gave a dinner, recently, in honor of the sixtieth birthday of Dr. Clifford U. Collins, Peoria.

Dr. Ludvig Hektoen addressed the thirty-eighth annual meeting of the Visiting Nurses Association of Chicago, January 17, at the Blackstone Hotel, on "Infantile Paralysis."

Dr. Arthur R. Metz has been appointed chief surgeon of the Chicago, Milwaukee and St. Paul Railway to succeed the late Dr. Benjamin F. Lounsbury and will have jurisdiction east of the Missouri River.

Dr. Irving S. Cutter, dean, Northwestern University Medical School, addressed the Chicago Library Club, January 12, on "How to Live to Be a Hundred"; Mr. Theodore W. Koch, Evanston, read his translation of Georges Duhamel's "Letter on the Sick."

Dr. Stuart Pritchard, Battle Creek, Mich., addressed the Chicago Tuberculosis Society, January 19, on "Thoracic Pain," and Drs. Carl A. Hedblom, Minas Joannides and Samuel D. Rosenthal on "Experimental Aspiratory Abscess of the Lung in the Dog."

Prof. Arthur H. Compton, Ph.D., recent Nobel Prize winner, was guest of honor at a faculty dinner at the University of Chicago, January 12; Dr. Compton is a member of the Council on Physical Therapy of the American Medical Association.

At the official opening of the Eastern Illinois Memorial Sanatorium, Urbana, recently, Dr. Charles A. Elliott, professor of medicine, Northwestern University Medical School, Chicago, and vice-president of the American Medical Association, gave an address on progress in medicine.

Dr. Jacob C. Kraft, Chicago, gave a clinic for deficient children at St. Mary's Hospital, East

St. Louis, January 12, under the auspices of the St. Clair County Medical Society, and Dr. Lewis W. Bremerman, Chicago, addressed the society in the evening at a banquet.

Dr. Peter Kronfeld has received the first research appointment under the Kuppenheimer Foundation at the University of Chicago, where he has been appointed assistant professor of ophthalmology. According to *Science*, Dr. Kronfeld until recently was an assistant in the eye clinic of Prof. Josef Muller, Vienna.

Dr. Oscar C. Breitenbach of Waukegan addressed the Indiana Academy of Ophthalmology and Otolaryngology at their semi-annual meeting in Fort Wayne last month on "Surgical Principles and Their Adaptation to Sinus Pathology."

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## News Notes

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The *Boston Medical and Surgical Journal* will celebrate the 100th anniversary of its first issue with a dinner at Hotel Somerset, Boston, February 18.

—A Conference on Rheumatic Diseases is to be held at Bath, England, on Thursday and Friday, May 10 and 11, 1928. Sir George Newman, Chief Medical Officer of the British Ministry of Health, has kindly consented to act as President of the Conference. There will be three Sessions: (1) Social Aspects, presided over by Lord Dawson of Penn, Physician to H. M. King George; (2) Causation, presided over by Sir Humphry Rolleston, (Regius Professor of Physic, University of Cambridge), and (3) Treatment presided over by Sir E. Farquhar Buzzard (Regius Professor of Medicine, University of Oxford). The local Hon. Medical Secretary is Dr. Vincent Coates, 10, Circus, Bath, England.

—"The Hebrew Physician," (HaRofeh Ho-Ivree), the only medical journal published outside of Palestine which is written in Hebrew, has just made its initial appearance.

This Journal is under the editorship of Dr. Moses Einhorn and Dr. A. Goldenstein. It contains articles on general medical subjects and has a special section devoted to new Hebrew medical terminology. All physicians who are interested in this journal are requested to com-

municate with the editors, addressing them c/o "The Hebrew Physician," 286 West 86th St., New York City.

—The Abbott Laboratories, North Chicago, Ill., announce the purchase of John T. Milliken & Company of St. Louis.

The Milliken Company was established in 1894 by John T. Milliken to manufacture a complete line of pharmaceutical products. On the death of Mr. Milliken in 1921, the business was taken over by the trustees of the estate and John D. Gillis was elected president. Since that time, the company has expanded its line of specialties and extended its business throughout the south, also into some portions of the middle west.

Dr. Alfred S. Burdick, president of the Abbott Laboratories, states that the Milliken business will be continued at St. Louis for the present with no changes in personnel. It will be operated as a branch of the Abbott Laboratories, similar to the Dermatological Research Laboratories, which was purchased by Abbott in 1922.

The annual midwinter meeting and clinic of the Chicago Dental Society was held at the Drake Hotel, January 24-26.

—The Chicago League for the Hard of Hearing celebrated the twelfth anniversary of the founding of the league with a reception at Recital Hall, January 18.

—Mrs. Lucy Hagenow was sentenced by Judge Feinberg to fourteen years in the state penitentiary, January 14, it is reported, for murder by a criminal operation.

—During the year 1927, St. Francis' Hospital, Evanston, increased its capacity by fifteen beds, making the total now 225, and opened a children's ward, an emergency ward and a nurses' home.

—The Chicago Eye, Ear, Nose and Throat College opened its new ten-story fire-proof building at 231 West Washington Street, January 17; it is designed to accommodate seventy-five patients.

—The Chicago Surgical Society held its clinical meeting, January 6, at the Presbyterian Hospital, and the scientific program at the American College of Surgeons in the evening; among others, Dr. Arthur Dean Bevan spoke on "Surgery of the Spleen," and Dr. Edmund Andrews on "Newer Aspects of Liver Disease."

—Dr. Frank Billings has been elected president of the McCormick Institute for Infectious Diseases, and Dr. James B. Herrick, vice president. Dr. Ludvig Hektoen is secretary; during the coming year, the principal subject for research at the institute will be infantile paralysis.

—At the annual meeting of the Chicago Heart Association, January 20, Dr. William St. Lawrence, chief of the children's cardiac clinic, St. Luke's Hospital, New York, gave an address on "Nature of Heart Failure and the Problem of Exercise of Children with Heart Diseases."

—At a meeting of the Chicago Neurological Society at the Drake Hotel, January 19, Dr. Hugh T. Patrick read a paper on "Recurrent Attacks Other Than Migraine and Infantile Convulsions Preceding True Epilepsy," and Drs. Roy Grinker and Richard A. Lifvendahl on "Study of Cerebral Tuberculomas."

—Dr. Joseph B. De Lee presented a motion picture obstetric case report—hydrocephalus in labor—before the Chicago Gynecological Society, January 20; Dr. Henry Schmitz read a paper on "Diagnosis and Treatment of Sterility Due to the Closure of the Uterine Tubes," and Dr. Frederick H. Falls discussed "Intra-Uterine Diagnosis of Monstrosities."

—Mr. and Mrs. Albert D. Lasker have given to the University of Chicago an endowment fund of \$1,000,000 for medical research to be directed toward establishing the causes, nature and prevention and cure of the degenerative diseases. President Mason in announcing the gift said that this concentration of research energy will constitute a unit attack on the diseases of men and women of middle age when their intelligence is at the highest and their value to the community is greatest. The institution which the gift establishes will be known as the Lasker Foundation for Medical Research. The Lasker endowment brings the sum of the donations in the history of the University of Chicago School of Medicine to more than \$25,000,000.

—The Southern Illinois Medical Association gave a testimonial dinner at Cairo, December 14, to celebrate the completion of fifty years in the practice of medicine by Dr. William F. Grinstead. The toastmaster, Dr. Andy Hall, Mount Vernon, presented to the guest of honor a silver loving cup on behalf of the Association and a



copy of the guest list bound in leather. In addition, telegrams and letters of congratulation from distant places were read. The speakers included Drs. Jonathan L. Wiggins, East St. Louis; Roland Hill, St. Louis; G. Henry Mundt, Chicago, president of the Illinois State Medical Society; Congressman Ralph Bailey, Sikeston, Mo., and Judge Albert Watson, Mount Vernon. Practically every member of the Alexander County Medical Society was present, as well as friends from other organizations.

## Deaths

EDWIN SAWYER ANTISDALE, Chicago; University of Michigan Medical School, Ann Arbor, 1890; aged 66; died, January 1, of ulcerative, rheumatic endocarditis.

GEORGE E. BASS, Chicago; University of Vermont College of Medicine, Burlington, 1882; a Fellow A. M. A.; aged 72, died, December 14, of cerebral hemorrhage.

JOSEPH ZEPHER BERGERON, Chicago; Rush Medical College, Chicago, 1889; a Fellow A. M. A.; member of the American Academy of Ophthalmology and Oto-Laryngology; formerly instructor in laryngology, rhinology and otology, College of Physicians and Surgeons, Chicago; attending otolaryngologist and rhinologist to St. Joseph's Hospital; aged 63; died, Dec. 20, 1927, of coronary thrombosis and angina pectoris.

FRANCIS BASCOM BULLARD, Mount Pulaski, Ill.; Rush Medical College, Chicago, 1878; aged 77; died, January 2, of heart disease.

HARRY JOSEPH DWYER, Chicago; University of Illinois College of Medicine, Chicago, 1912; a Fellow A. M. A.; associate in dermatology, Loyola University School of Medicine, Chicago; served during the World War; attending dermatologist and syphilologist to the Mercy Hospital; aged 38; died, Dec. 16, 1927, at his home in Oak Park.

MILTON S. GREENE, Mill Shoals, Ill.; Medical College of Evansville, Ind., 1881; formerly a druggist; aged 71; died, in November, 1927, of paralysis and nephritis.

JULIUS GRINKER, Chicago; Medical Department of the University of the City of New York, 1891; a Fellow A. M. A.; Rush Medical College, Chicago, 1895; professor emeritus of nervous and mental diseases, Northwestern University Medical School; member of the Central Neuropsychiatric Association; member of the House of Delegates of the American Medical Association, 1907; attending neurologist at the Wesley Memorial, South Shore and Washington Park hospitals; consulting neurologist at the Illinois Masonic Hospital, Chicago, and the Cook County Infirmary, Oak Forest; formerly on

the staff of the Cook County Hospital; aged 60; died, January 11, at the Michael Reese Hospital, of carcinoma of the pancreas.

MICHAEL V. HUFFMAN, Galesburg, Ill.; Electric Medical Institute, Cincinnati, 1870; aged 88; died, Dec. 24, 1927, of chronic myocarditis.

STEPHEN FRANCIS KUBALA, Chicago; University of Texas School of Medicine, Galveston, 1910; member of the Illinois State Medical Society; aged 49; was found dead, January 2, of heart disease and arteriosclerosis.

BENJAMIN L. MAIENTHAL, Decatur, Ill.; University of Louisville (Ky.) School of Medicine, 1891; a Fellow A. M. A.; formerly on the staff of the Decatur and Macon County Hospital; aged 57; died, Dec. 19, 1927, at Memphis, Tenn., of diabetes mellitus, angina pectoris and bronchopneumonia.

LUTHER HOWARD MALONEY, Savanna, Ill.; Hahne-mann Medical College and Hospital, Chicago, 1884; aged 69; died, August 10, of carcinoma of the stomach.

HERBERT ARTHUR PARKYN, Chicago; Queen's University Faculty of Medicine, Kingston, Ont., Canada, 1892; aged 57; died, Dec. 22, 1927, at his home in Highland Park, Ill., of pneumonia.

FRED ARTHUR VAN ARSDALE, Chicago; Harvey Medical College, Chicago, 1902; aged 60; died, December 19, at St. Bernard's Hospital, of chronic nephritis and cerebral hemorrhage.

CLIFFORD EVAN VAN SLYKE, Mount Greenwood, Ill.; Loyola University School of Medicine, Chicago, 1916; a Fellow A. M. A.; on the staff of the Rose-land Community Hospital, Chicago, and the St. Francis Hospital, Blue Island, where he died, Dec. 16, 1927, of pneumonia.

SIDNEY WALKER, Chicago; University of Tennessee College of Medicine, Memphis, 1884; aged 71; died, December 19, at his winter home in New Orleans, of myocarditis.

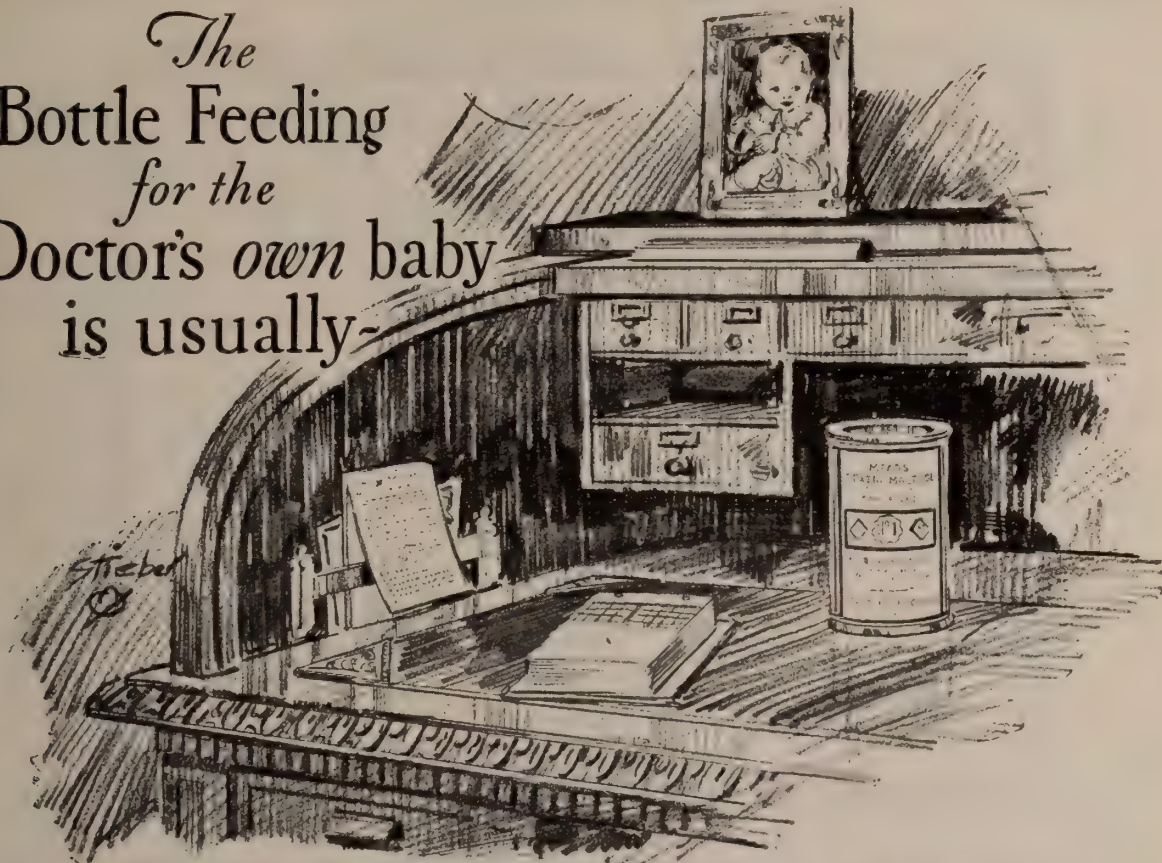
CLARENCE LEWIS WALTON, Cuba, Ill.; Chicago College of Medicine and Surgery, 1914; member of the Illinois State Medical Society; aged 43; died, Dec. 27, 1927, at the Graham Hospital, Canton, of pneumonia.

GEORGE B. WALLACE, Chicago; Indiana Medical College, Indianapolis, 1877; aged 71; died, Dec. 28, 1927, of acute bronchitis and myocarditis.

DELBERT HARRISON LAIRD, Chicago; Rush Medical College, Chicago, 1911; a Fellow A. M. A.; aged 39; died, Dec. 31, 1927, of heart disease and chronic nephritis.

PAUL EMMETT GREENLEAF, Bloomington, Ill.; University of Louisville (Ky.) School of Medicine, 1909; a Fellow A. M. A.; served during the World War; aged 42; died, Dec. 22, 1927, of cerebral hemorrhage and heart disease.

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# Illinois Medical Journal

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SEVENTY-EIGHTH ANNUAL MEETING, CHICAGO, MAY 8, 9, 10, 11, 1928

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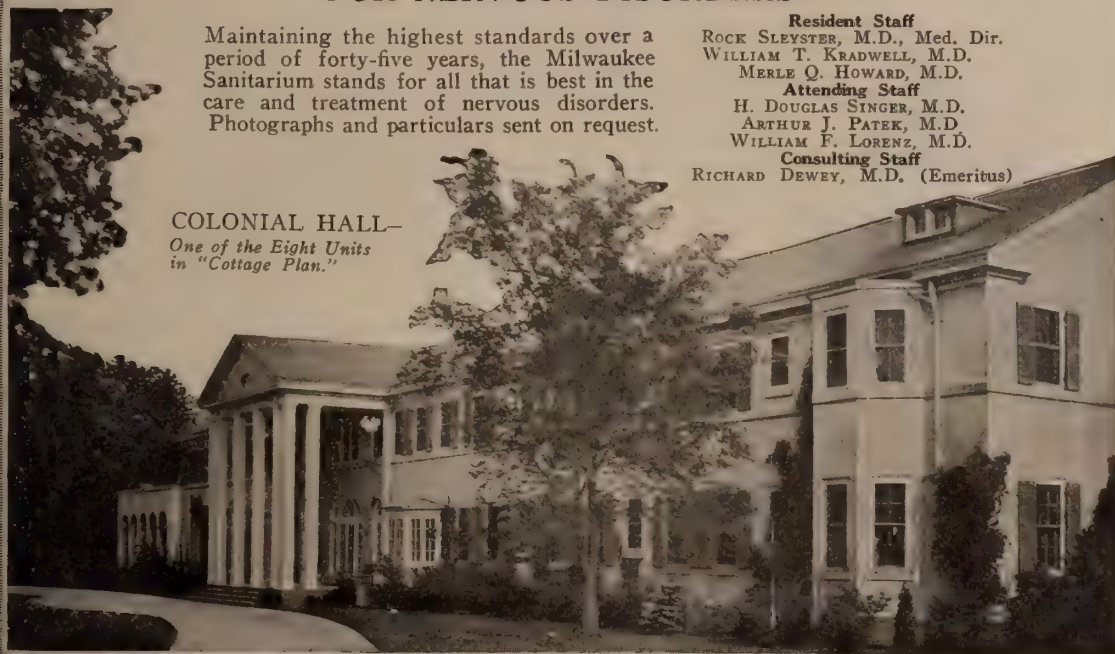
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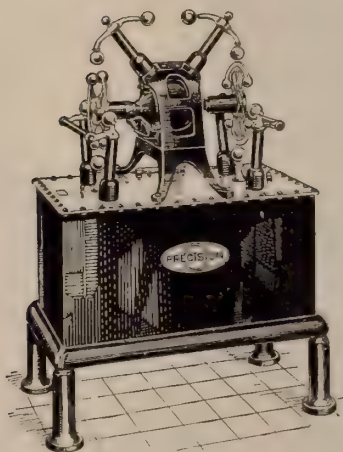
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# ILLINOIS MEDICAL JOURNAL

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No. 3

## ILLINOIS MEDICAL JOURNAL

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Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

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## Editorial

A WONDERFUL SERVICE FROM YOUR COUNTY AND STATE MEDICAL SOCIETY. THE BEST BARGAIN OF THE AGE FOR A PHYSICIAN IS MEMBERSHIP IN ORGANIZED MEDICINE

THIS PROVIDES THE DOCTOR WITH UNEQUALED ECONOMIC PROTECTION AT A MINIMUM PRICE AND MAXIMUM ETHICAL STANDARDS

Avoidance of affiliation with outside agencies that are organized for personal or dubious profit, though with cleverly disguised motives, is something to which the medical profession must adhere.

Organized medicine, as vested in your county and your state society, provides the staunchest of economic and professional protection.

This is done at a minimum price. Organized medicine gives the members of its accredited societies, the maximum of efficient service, at a cost that is almost picayunish. This is quite in line with the ratio of skill and science versus financial return with which the profession serves the public. And all of this is in juxtaposition with what the various cults and Isms levy upon the members of their numerous organizations. For instance chiropractors in Illinois pay annual dues of \$120 per capita, merely as a starter, for the up-keep of their organizations. Further, special assessments up to the sum of \$500, are frequently the order of the day.

To the professional organizer the ranks of the ethical physicians, seem fat fields, ripe for the harvest. Notoriously poor business men, as are the bulk of ethical physicians, to the unethical this body of highminded men, seem more than foolish, when they turn away from the primrose fields of dalliance. How to glean from the doctors, the tremendous sums of money that fatten the treasuries of the cults, is a scheme appealing to the promoters of "blue-sky" everywhere. Sugar-coated, promising more than is possible



of performance, the overworked physician sees in gold-plated junk a rosy future. Turning aside from the reputable safety of what organized medicine can do, and is doing for its members, the duped doctor risks what he cannot afford to lose, in a lay-dictated, profit grabbing concern, that thinks of its cashbox first and the doctor last. It's the same old tale of the gold brick versus the government bond.

This point was recently and beautifully illustrated, by a near-stampede of many unthinking doctors, to a currently propagandized so-called "Medical Economic League," lay-begotten and lay-bred, and under a management of which the public press made a target for accusations of possessing an almost unsurpassed criminal record, to which neither denial nor disproof has ever been made.

Many a doctor can congratulate himself upon a narrow escape from what might have proven to be a direful entanglement. This instance cited is identified more especially with Cook county. Similar situations may arise anywhere.

In the February number of the ILLINOIS MEDICAL JOURNAL attention was called to "the Unapproachable Economic Service to physicians that is given by the Chicago and the Illinois State Medical societies."

It seems wise in this issue to set forth additional data showing how stably and how ably the local medical society is the physician's bulwark.

Money spent in dues for a state or local medical society is one of the safest, surest investments a physician can make.

For the nominal dues of approximately \$10.00 a man gets medico-legal protection and his fellowship in the society of his confreres. Affiliation with this large and representative body of men is of great value and importance to every physician.

While the figures vary in the respective counties, from \$8 downstate to \$13 in Cook County per year depending upon the local activities of the county society in which you reside. Illustrative of the benefits secured from such affiliation note the following:

1. For approximately \$10 per year you get medico-legal protection; membership in your County and Illinois State Medical Societies and the ILLINOIS MEDICAL JOURNAL. Membership in

the above makes you eligible also to fellowship in the American Medical Association. Affiliation and association with this large representative body of men is of great value and importance to every physician.

2. Medical Defense. Out of your annual dues paid, the trustees of the State Medical Society are required to turn \$1.50 over to the "medical defense committee" for the protection and defense of members of the society against whom suits for malpractice or damages may be brought. For years the Illinois State Medical Society has been meeting all expenses of such litigation—that is, court costs, attorney's fees, costs of appeals, witness fees, the cost of record—no limitation being placed on this sort of expense of an individual case.

This means that if you become a member of the Illinois State Medical Society you will be defended in every effective manner possible against suits for damages for alleged malpractice, as well as attempted blackmail. This one feature alone is worth many times the cost of membership. Private defense companies are charging \$15 to \$75 per year and upwards for the defense and indemnity.

Medical Legislation. Also \$1 is set aside for a fund to be used by the Public Relations Committee for the purpose of combating vicious legislation.

Members of the Illinois State Medical Society are also eligible to membership in any or all of the various affiliated special medical societies in Illinois.

3. Membership in the Illinois State Medical Society. All members of any county Medical Society are ipso facto members of the Illinois State Medical Society and will receive all publications of the State Society without any additional fees, dues or subscriptions.

Memberships in the state and local society are necessary before you can affiliate with the reputable, professional societies of the country and the American Medical Association. In some states a year's membership in the local society is required before they can secure a license by examination or reciprocity.

4. The Journal of the Illinois State Medical Society. This Journal, owned and published monthly by the medical profession of Illinois, is sent free to each member. The official organ of the Illinois State Medical Society, one of the

largest and most influential state organizations in the country, it is among the most comprehensive state medical journals both in point of circulation and editorial scope. It ranks highly, both in size and in influence with all medical journals. *Further, in the fight against economic evils oppressing the medical profession, the ILLINOIS MEDICAL JOURNAL has been not only a leader, but ever a pioneer.* In the Journal is printed the proceedings of the Illinois State Medical Society; the Tri-State District Medical Society (Illinois, Iowa, Wisconsin, and Minnesota) and the Chicago Medical Society, which is the largest local medical society in the world. The Chicago Medical Society meets every week, and it has fifteen branches, proceedings of which also are printed in the ILLINOIS MEDICAL JOURNAL, as well as of eleven affiliated societies, namely; Gynecological, Pathological, Ophthalmological, Surgical, Urological, Laryngological and Otological; Orthopedic, pediatric, neurological, Roentgen Ray, Medical Legal. On the programs of these various societies appear from time to time a great many of the most eminent men of America and Europe. In the Journal also is published the papers read and the reports of all meetings of the respective county society meetings throughout the state, as well as all the news of interest to medical men in Illinois and throughout the United States. The price of the Journal for non-members is \$3.00 per year. It is sent to all members of the Illinois State Medical Society, as one of the perquisites of membership.

5. Reformation of Medical Conditions. Many reforms are being carried on which in previous years were impossible. A year ago the Medical Legislation Committee of the Illinois State Medical Society succeeded in having passed by the Illinois State Legislature what is considered the best medical practice act in the United States. This Society has a representative as chairman of this committee in Springfield, and the committee is working to the good advantage of medicine in this State. The committee is receiving financial support from the State Medical Society as necessity requires. Every year different cults and branches of so-called medicine try to have special laws passed which will license them through examinations which do not conform to the medical practice act. It is only through large membership, financial and moral support

that this type of legislation can be controlled.

Abuse of medical charities, illegitimate and unethical methods of practice, and all the other evils which have embarrassed the physician and reduced his income can only be successfully handled by a well organized and compact profession, able to take a positive stand on these matters and to carry out its decisions. There is in view (under thorough organization), relief from many of our present difficulties. There never will be devised a patent mechanism which will relieve the doctor of participation in our political activities. Physicians must govern themselves or they will be misgoverned.

6. Eligibility to Fellowship in the American Medical Association. The only way in which a physician can become a member of the State or National organization is through the local society of the County in which he lives. The advantages and privileges to be gained through membership in this great association need not be enlarged upon. Fellowship in the American Medical Association includes *The Journal of the American Medical Association*, the greatest weekly medical journal published in the United States.

7. Regulations of Pharmaceutical Preparations. The American Medical Association has established a committee, known as the Council on Pharmacy and Chemistry, for the purpose of examining, analyzing and reporting from time to time, to the profession its findings on the most important proprietary preparations, such as the general practitioner is constantly being importuned to buy and prescribe for his patients. This movement, which is of vital importance to every practicing physician, deserves the support of all members of the profession, regardless of society affiliations. By becoming a member of your local society you will come more closely in touch with organized and systematic efforts for the uplift and benefit of the profession at large.

8. The Completion of Medical Organization in Illinois. The Illinois State Medical Society, today, comprises three-fourths of the reputable members in the State. It is to the interest of every physician in Illinois to complete and strengthen this organized and concerted movement on the part of the profession for the betterment of local conditions. The suppression of quackery, the prevention of enactment of vicious legislation, and the consummation of other



needed reforms can only be accomplished by complete and thorough organization and unanimity on the part of the profession of the State. In this work the support and cooperation of every reputable physician is requested.

The welfare of your profession depends upon the support you give it. A well organized profession means greater respect and better compensation.

The Illinois State Medical Society desires your support and cooperation. Go to the next meeting of your local or county society and meet the other physicians of your neighborhood. Ask one of the officers of the society for an application blank, fill out the blank, either send or better hand it to the President or Secretary together with the fee for membership in your county society and thus secure membership in the organized profession of the State and participate in the benefits and privileges of medical organization.

**Qualifications for Membership**—Every registered physician residing in any county, who is of good moral and professional standing and who does not claim to practice any exclusive system of medicine, shall be eligible for membership.

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### GO TO THE POLLS AND VOTE APRIL 10TH

DOCTORS SHOULD TABOO PARTY POLITICS—NOW IS THE TIME TO MAKE YOUR INFLUENCE COUNT—DOCTORS' TROUBLES ARE ECONOMIC  
PHYSICIANS HAVE TO MAKE THE CHOICE BETWEEN A REPUBLICAN CANDIDATE WHO IS WRONG ECONOMICALLY AND A DEMOCRAT WHO IS RIGHT ECONOMICALLY—THAT WILL BE THE REAL TEST OF THE LOYALTY TO AN ECONOMIC PRINCIPLE.

President Coolidge has said, "Every voter ought not merely to vote, but to vote under the inspiration of a high purpose to serve the nation." The job of doing so confronts us at the primaries on April 10.

By the time the physicians of the land spend even more money, and more time, to discover that neither they nor their profession can compete with practical and practicing politicians, the importance of paying more attention to elec-

tion day will be brought home to every man with an "M.D." at the end of his name who calmly sits back now and lets the country be run by the unscrupulous who are not "too busy to bother" with the ballot.

What economic self-preservation the medical profession has been able to achieve has not accrued from any devotion to citizenship duties, but because of the respect in which, even in this topsyturvy day, the average citizen, still holds the medical profession.

If the doctors of Illinois would attend ever so slightly to their personal citizenship duties,—the task involving their personal participation in all elections—the result would be a near-panacea for a multitude of civic ills, that are insidiously near to eating at the very core of the essence of civilization.

It is no longer a question of a man's "getting" or "not getting into politics." It is up to the medical men to cry "Checkmate" to politics. For the politicians of the country have already grabbed hold of the very tail of the medical profession, and are literally swinging this august body of men about with as little ceremony as if it were a yellow dog!

Blinking at facts is useless. The entire trend and achievements of legislation in the past twenty years shows how medicine is being made the pawn of politics. In another twenty years the medical profession will find itself, half throttled and altogether ham-strung unless it wakes up. Nor does "waking up" mean that any man can do this deed vicariously. The situation is up to the individual physicians of the land.

Each doctor must doff his toga of science sufficiently long to discover what is going on before the result gives him and his profession, and par consequence, the public health and the virility of civilization,—a knock-out blow. Just as soon as physicians will enter the actual arena of politics and lend their professional support to those ethical lawyers and clergymen who are accomplishing a brave futility in the effort of getting politicians out of politics, there is going to be a marked change in conditions and a re-stabilizing of the foundations of the world's greatest democracy.

Well has it been said that the policies of one set of physicians are in force so long as "fifty

and one tenth per cent of the votes are cast for those politicians, and the opposite policies are in force when one voter in a thousand changes his mind. It is on such extremely slight changes as these that often hangs success in any political field."

Even now, hobbled by the almost ubiquitous lethargy with which the average physician regards elections, candidates and the entire system of democratic government,—physicians have far more influence than they suspect with members of law-making bodies. Wide knowledge, good judgment, public spirit and the gift of vision are sine qua non with every successful man of medicine. Physicians everywhere should realize this imminent necessity for their stating to the public as well as to law-makers, not only the ideals of the profession, but the arguments for their adoption and their absolute bearing upon the health and the wealth of every country. This setting forth of principles, should, if indicated, be also a going forth to war for the right—a defense of medical ideals and of the country.

Everybody, everywhere may not agree with some of the ideas and dicta of President Coolidge. But every sane minded individual, *anywhere*, must coincide with these assertions of the nation's chief executive:

"Many of the founders of our government gave all their wealth and their lives for the right of franchise.

"The right of franchise is the right to vote.

"It is the most valuable heritage that the American people have.

"The right to vote is more than a privilege.

"It is a duty.

"Our government will continue to give us the opportunity for independence and freedom only if we do our duty towards the government.

"Our duty is to go to the polls and vote intelligently.

"It is our duty to see that each member of our family, who is qualified, votes.

"It is our duty to know the records of the candidates.

"To some of them you will entrust your liberty and the protection of your property."

Again are the physicians of the country besought to take heed of the electoral situation.

## YOU MAY NOT BE INTERESTED IN POLITICS, BUT POLITICS IS INTERESTED IN YOU

IN ITS MANAGEMENT OF PUBLIC BUSINESS IT GRIPS EVERY MAN'S CONTACT WITH SOCIETY AND WITH THE GOVERNMENT—PHYSICIANS CANNOT AFFORD TO QUIT POLITICS, FOR POLITICS WILL NOT QUIT THEM—THE QUALITY OF POLITICS DEPENDS UPON THE DEGREE OF PUBLIC INTEREST IN IT

Party politics must go under the hammer for the nonce if physicians of Illinois are going to make count their influence for requisite legislation through the results of the next election.

There is no time to waste, Primaries are hanging over our heads. April 10 is a day of destiny. The voice of the candidate is heard in the land, and the voice of the physician must be raised immediately to discover just what these candidates intend to do about matters affecting the medical profession and its dependent, the public health and welfare.

Ballots talk. More effective than any other oratory is the count at the polls. Let the physicians of Illinois show that this gift of electoral eloquence is not denied them by making themselves heard at *the time that the candidates are selected for nomination*. This preliminary right of selection will cut down the work later on.

The times demand that patriotism supersede partisanship. What a candidate for any office is going to do about the insidious red propaganda springing up stout as purslane all over the land, each and every doctor should discover without any delay.

Even the physician can't accomplish this miracle.

Doctors who think that they can dodge the perhaps tedious, but admittedly necessary task of becoming interested to the point of personal exertion in the government of the United States are mistaken. The rule holds that a man must govern his horse or be governed. Apathetic physicians who are willing to submit to the despotism of money-grabbing, wire-pulling politicians may find food for thought and spur to action on April 10 in this able editorial, appear-



ing recently in the oldest newspaper in the State of Illinois—"THE CHICAGO JOURNAL."

This reads, under the heading "Politics"—

"There is no escaping politics. It has a bearing on almost every human interest. Frank Kent, one of the ablest of correspondents in Washington, where he represents the *Baltimore Sun*, has been writing for the publication called *The Nation's Business*, and saying that in a greater or less degree every adult American is a politician perforce. He may not be "interested in politics," but politics is interested in him. In its management of public business it grips every man's contact with society and with the government.

"It is impossible, Kent shows, to be born or to die, to marry or to be divorced, without politics having to do with the matter. Every tax you pay, the smooth streets and the good roads, the public schools, the fire department, the health department, the water you drink, asylums, courts, custom houses, jails and penitentiaries, the police, the post office, every law and ordinance—all spring from government, government springs from parties, and parties are in politics.

"The people can not afford to quit politics, for politics will not quit them. The quality of the politics depends upon the degree of the public's interest in it."

What better, plainer plea can be made the physician and at this crucial moment?

Remember the primaries on April Tenth.

#### AN APPEAL TO PROSPECTIVE MEMBERS OF THE LEGISLATURE

Prospective members of the legislature should be informed on the following general principles, of interest equally to the medical profession and the general public.

We have too many laws, and too large a tax levy.

Living expense and taxes will be lowered as soon as hundreds of over-priced, interfering, recently adopted and unnecessary laws are done away with. America is mortally ill from a plague of laws. This evil is maintained at an annual cost per capita of \$91, and of about \$350 per family. One out of every twelve people in the United States who are over sixteen years of age, and who are gainfully employed, is on the public payroll. In the last few years this ratio has risen from one out of every 1,000.

There are 15,000,000 employees on the public

payroll according to the estimates of census statisticians. *This places an office-holder or "tax-consumer" on the backs of every two tax-producers.* Exclusive of pensioners there are almost three million public servants whose pay comes from the ever increasing taxes. A large proportion of this number is engaged in the administration and execution of superfluous statutes.

A similar situation crushed France and produced the French revolution. It was the bane and damnation of Germany.

*"Americans are now compelled by law to do, and prohibited by law from doing, more things than were the citizens of autocratic Europe before the war."*

We are the victims of a paternalistic regime that will eventually enslave and bankrupt the country. The cost of government has become unbearable. Too many functions of local and of state governments are being controlled by hidden bureaus in Washington. *There is more power exercised today in these bureaus by unknown "experts," political appointees of whispering propaganda, than by the courts themselves.*

Centralization of government, bureaucracy, state subsidies and autocratic control are a poignant menace, and a fatal growth.

Bureaucracy is a curse wherever inaugurated. In the management of medical affairs it is fatal. Germany stood at the pinnacle of medical achievement thirty years ago. Under bureaucratically administered state medicine, Germany has come to have the worst medical service in the world and the poorest care for the health of the people. It will be ruinous to the health and welfare of the United States if this system is adopted in this country.

Before the coming legislature there will be presented many bills, attempting to regulate incompetently the practice of medicine and needlessly to increase taxation. Many of these bills will provide for the licensing to practice medicine, of uneducated and improperly equipped men and women.

We ask no especial favors for doctors, but we believe in a single standard of education and a thorough professional training before a man or woman can be licensed to practice the healing art or to diagnose disease.

Persons who seek a license to treat human ailment in the State of Illinois should know how

to make a diagnosis of disease which is essential for the conservation of the public health.

There should be no side door short cuts to the practice of the treatment of disease in this State.

Ask your prospective representative what will be his attitude towards medical legislation designed to increase taxes and to medical legislation intended to safeguard your health and that of your neighbors and fellow-citizens.

## CHIEF JUSTICE ILLINOIS SUPREME COURT GIVES WARNING

ABLE JURIST CONDEMNS FALSE PREMISES AND FUTILE PROMISES OF SO-CALLED "FEDERAL AID" IN LINE WITH CONTINUED PROTEST OF MEDICAL PROFESSION

Able patriots who have had their ears to the ground will delight in the frank admission of Justice Floyd E. Thompson of the Illinois Supreme Court, that a check rein needs to be applied to current bureaucratic tendencies of legislation and mis-directed public sentiment.

Modesty forbids further comment. Otherwise it might not be amiss to point out that the legal profession seems well on the way to tread in the footsteps of those trailblazers in the medical profession who long ago espied the path that led safely away from the morasses of socialization and bureaucracy. This, not only, speaking generically but more specifically as it applies to the public welfare and the medical profession.

It is only fair to Justice Thompson to remark that the gift of vision seems to have been his for some time past. His candid epitome of the current evils resulting from so-called "Federal Aid," expressed in a speech made early in February at Rushville, Ills., is consistent with his crusade of several years duration.

In December, 1926, THE ILLINOIS MEDICAL JOURNAL published Justice Thompson's statement rebuking bureaucracy as a curse under any circumstances, and as a fatality when applied to medicine. Justice Thompson spoke to this effect before a convention of the Illinois Lions.

Justice Thompson said in part on Feb. 6, 1928, while speaking before the Schuyler Community club at Rushville, Ills.:

In the last decade there has been creeping upon us the vicious "fifty-fifty" system of Federal aid. Government aid is a tempting bait and many time-proven fundamental rights have been bartered for a party

helping from the governmental pork barrel. Our people do not seem to realize that all government "gifts" must come from their pockets. This whole system of subsidies to the state is morally, if not legally, wrong. Ten years ago these federal subsidies to the states amounted to less than \$6,500,000 a year; in 1925, they aggregated more than \$110,000,000. Vicious as the system is for the extravagance it breeds, its worst feature is the invasion of the Federal government into matters purely local. Under the "fifty-fifty" system each state must match the Federal appropriation to which it is entitled with an equal amount from the State treasury and must agree to submit to supervision of the expenditure of the joint fund by a bureau in Washington. This surrender of the sovereignty of the people of the several states is demanded as a condition precedent to the people getting back some of the money which was taken from them as taxes. Thus by indirection the Federal government gains control of local affairs which are by the Federal Constitution specifically reserved to the people of the several states.

Five principal subjects now come under this fifty-fifty system,—high-way construction, agricultural extension work, vocational education, vocational rehabilitation and maternity and infancy hygiene. Every one of these causes is worthy, but every one of them is distinctly local and is taken over by the federal government in direct violation of the spirit of the Constitution.

What the federal government distributes as federal aid it takes from the people of the several states, and so it is interesting to compare the amount sent to Washington and the amount returned. The last figures I have show the people of seven states—New York, Pennsylvania, Illinois, Massachusetts, Michigan, Ohio and California—pay 70 per cent of the total federal income tax, and the people of eight other states pay half of the remainder. On the other hand, the people of the thirty-three states that pay 15 per cent of the total income tax receive as federal aid 53 per cent of the total distributed under the fifty-fifty system. There is returned to the people of Nevada 317 per cent of the amount paid in by them, but the people of Connecticut have returned to their state only three-fourths of one per cent of the amount they send to Washington as income tax. The people of Illinois pay into the federal treasury as income tax over \$161,000,000, but they receive back under the fifty-fifty system less than \$6,000,000. In order to get this paltry amount returned for expenditure in this state we must raise a like amount by taxing ourselves again and then spend the \$12,000,000 under the direction of some political appointee in Washington who may be unfamiliar with our needs or conditions. The remaining \$155,000,000 sent to Washington is spent in other states or consumed in payrolls. Gross as the discrimination in the distribution of federal aid is, this evil is incomparable with the evils of usurpation accompanying the subsidies.

For approximately a quarter of a century, again and again, the editor has called repeated attention to the menacing trend of the times, in



efforts to use ethical medicine as the catspaw for the general socialization of the country.

Confirmation of this may be found easily through the various reports submitted by the editor while he was a member of the Public Relations Committee of the Chicago Medical Society, and the Legislative Committee of the Illinois State Medical Society and also by his various contributions to this effect, published during the past twenty-five years, not only to the ILLINOIS MEDICAL JOURNAL but to other professional and lay periodicals.

This phase of economics, that is as much general as it is medical, has been the consistent crusade of the editor during his tenure of office. Neither partisan politics nor personal ideals have entered into the campaign but rather the findings from a general survey of an evil, that while seemingly localized has all the symptoms of an epidemic with fatal results to democratic institutions and constitutional rights.

Justice Thompson does not stand alone in his allegiance to anti-bureaucratic ideals. Many other able men in public life have preceded him in rallying to this standard. This has been evidenced even in the columns of this journal, wherein have been printed from time to time, similar condemnations of approaching bureaucratic encroachment from leaders in all the political parties, including Former Governor Lowden of Illinois, Senators James Reed, William E. Borah, George H. Moses, Gov. A. C. Ritchie, and Nicholas Murray Butler, candidate for nomination for president.

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#### THEY FOUND IT IN AN ANCIENT LAW BOOK AT LA SALLE, ILLINOIS—ACCIDENTAL DISCOVERY OF IMPORTANT HISTORICAL DATA

THIS SUCCESS SHOULD INSPIRE OTHERS TO SIMILAR SEARCH

In a disused law-book down at La Salle, Ill., there was found recently a document of great interest from a standpoint of medical history. Dr. W. W. Greaves forwarded the document to Dr. Harold M. Camp.

This interesting paper is a membership certificate in the "State Medical Society," in nice form, printed as a diploma, and issued "under the Constitution to Dr. Thomas W. Hennessey,

of La Salle." It is dated Feb. 27, 1841, at Springfield, or nine years before the present Illinois State Medical Society came into existence.

Signatures on this diploma are those of "John Todd, president; John F. Charles, vice-president; Francis A. McNeil, secretary; 'censors,' John C. Bennett, William B. Egan, R. T. Edmondson, J. H. Lyons, W. J. Gibbs and E. H. Merryman."

With the exception of a few physicians who have spent much time in research work, this discovery comes probably as a piece of news that any similar organization had ever antedated the Illinois State Medical society. That such an association had been formed earlier, even though it failed to survive, has been the vague impression among medical historians. Tangible evidence had been lacking until now.

Even now the scope of the so-called "State Medical Society" remains vague. The name itself differs from that of the current organization in that the word "Illinois" is omitted.

Reproduction of this certificate, and further elucidative data will appear in the second volume of the History of Medical Practice in Illinois. This is now in process of compilation.

Undoubtedly there are other ancient volumes in various libraries, private collections or isolated attics in the State, that might yield similar historical treasure, if search is made.

Unfortunately often that which is taken for granted is the important matter of which many are ignorant. Therefore an especial appeal is made for an additional ransacking of every available source of information and the caution that no clipping, document or diary is too trivial to be subjected to the examination and appraisal of the committee on medical history if justice is to be done to the pioneers of the profession in this state.

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#### COMPULSORY HEALTH INSURANCE CONTINUES ON THE TAB—AN ATTEMPT IS BEING MADE TO REVIVE THIS OBNOXIOUS SCHEME

By eschewing vacations and sticking continuously to the job, radical propaganda under guise of "welfare activity" holds close to the traditions of all other works of Satan, in unremitting

undermining of democracy, and the peace, safety and happiness of mankind.

Compulsory health insurance has never admitted defeat. True this measure went down for a long count in the middle of a good licking a few years ago. "Up and at 'em again" is the slogan hurtled into the ears of the proponents of this economic curse by their financial backers according to reports that have come to the *ILLINOIS MEDICAL JOURNAL*. Ohio and New York are the states immediately confronted by this menace if the rumors are true.

Now the American Association for Labor Legislation has made, and continues to make, a persistent if not always an open attempt to secure the enactment of compulsory state health insurance bills in every state in the union. To the average voter, sad to say, the very name of the proposed legislation sounds like a divine beneficence.

In various European countries where this especial piece of paternalistic legislation has not as yet been secured, a crusade for its installment is being conducted by the International Labor Organization of the League of Nations. When this body held its 1927 conference at Geneva, Switzerland—this by the way happened to date as the tenth annual meeting of that nature—resolutions were adopted seeking to install such legislation all over Europe. Embodying fundamental features of those bills introduced into the legislatures of the United States, the raising of funds however was to be done, or rather is to be done, in a different way.

The foreign idea is to have employer and employe contribute to the treasury, rather than, as in the United States, employer, employe and the *government*.

Fallacies of this socialistic plan have been bitter medicine in England. Long suffering Germany can also add its "Me, too," to this result. Well informed individuals realize that co-operative schemes offering life's essentials at a *cost absurdly below production*, is, to speak vernacularly, "all the bunk."

Thrift, initiative and independence fall by the wayside, and *the product dispensed inevitably falls below even mediocre standards*.

As an encourager of shiftlessness and incompetency such socialistic schemes should be crowned with laurel. State health insurance and

socialization of medical practice continue as live issues.

It may not be amiss, but rather decidedly to the point to quote here the epitomization of the situation stated so ably in the *Dearborn Independent* some weeks ago, under the signature of Marian Bruce Clark. Discussing the disguise of socialistic doctrines under masks of pretended benevolence, the article says in part:

Radical Propaganda is so alarmingly on the increase through federal centralization that the underlying motive must be exposed in all its nakedness to millions of American citizens who pay excessive taxes for the countless boards, commissions, "special agencies," and other bureaus existing solely for the purpose of socialistic control. There is a vast difference between constructive benevolence and communistic restraint; between industrial welfare and radical demands; between charity and peonage. Year after year the professional socialistic uplifter succeeds in piling up laws, in amending laws, and in obstructing laws, and by each succeeding step approaching nearer to the goal of the conscription of human rights.

We find the program thus arranged:

First. The "serving-without-salary" board of commission.

Second. State maintenance.

Third. The separate bureau or board.

Fourth. Centralization through federal bureaucratic control.

If such a program were to end with exorbitant taxes, coercion, and the breaking down of constitutional government, it would be bad enough, but it goes far deeper—it imposes a condition in which no man is master of his home because of the constant supervision of Government agents, it creates a nation of beggars, slackers, and irresponsibles who are taught to look to the Government for their every need. Teaching people to be dependent on the Government is one of the most insidious methods of destroying national morale.

The ultimate object of centralized federal control is socialistic.

The objective of socialism is communism.

The objective of communism is nationalization.

And the goal of nationalization is Sovietism.

Federal extension of power over our public utilities, our women, our children, and our private property rights through the misleading "separate agency" plan leads to the establishment of bureaucratic boards, commissions, and other agencies that interpret their own laws, promulgate their own rules—often inconsistent with law—and administer their own finances, present the ever-increasing problem of the invasion of constitutional rights and the encroachment upon the prerogatives of private property and citizenship.

And when defeated in one corner these same people run to another corner and try to force the rejected thing on the United States, under guise of a local District of Columbia Act, it is time to call attention to it.



## SUBSCRIBE NOW FOR THE MEDICAL HISTORY OF ILLINOIS

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*Order Your copy today! Don't lose out on this! Volume I is now ready.*

(Detach and return with your remittance.)

## SOME THINGS A WOMAN'S AUXILIARY COULD DO

Act as a medium between the profession and the laity.

Through our Women's Clubs we can assist in many ways in conveying the viewpoint of organized medicine to the public. We should see that

we get one of the speakers approved by the Educational Committee before every one of our women's organizations and I might say not alone women's clubs but any organizations which engage speakers. The Y. M. C. A., Rotary, Kiwanis and various men's organizations are asking for speakers. Their services are free.

We can see that the educational committee's health films are used, also the health poster exhibit, and health articles could be published in the club bulletins. These are also furnished for newspapers which could be used in place of Frank McCoy's columns who is a Bernarr McFadden graduate.

Health plays could be given.

Each year carry on some phase of health education work such as the eradication of typhoid fever or use of toxin-antitoxin, etc. In doing this health stories could be published in bulletins or newspapers.

See that the office of Chairman of Public Health or any other important office, where they could have influence, is filled by a physician's wife.

Help push periodic health examinations even to our own auxiliaries. Have members' birthdays recorded and when their birthday is at hand send a card and on it inform them of their examination.

Help spread propaganda on abuses of all medical charities such as free dispensaries, Infant Welfare stations, etc.; also on the constant trend toward paternalism which these things foster. Women's clubs in their willingness to help humanity sometimes fail to see the paternalistic side of certain movements. Auxiliary members should read the editorials in all medical journals. Auxiliary news will be found in the ILLINOIS MEDICAL JOURNAL.

Aid in medical legislation through the Auxiliary. Great pressure can be brought to bear upon legislators by women's organizations.

Our women's auxiliary should use plenty of these speakers to enlighten the doctors' wives as to some of the economic problems of today, which are confronting medicine and which will affect the practice of their husbands. Also we could learn more about legislation which affects medicine. Bills such as the Harrison Narcotic act, State Medicine, the Sheppard-Towner Act or any pending bill. Many physicians' wives have said that they voted in their clubs for a

resolution approving the bill because they did not understand it. Spread propaganda on these bills.

Know that people for whom we vote are friendly to medicine.

Have a propaganda or publicity chairman and have names of all the members of her auxiliary unit and to what clubs they belong and when we have anything of importance to agitate see that these women are active in their various clubs.

It would be an excellent thing if we could have a doctor's wife from each auxiliary as delegate to the Legislative Forum.

I believe one of the important features is that this may tend to stimulate an interest in organized medicine among some physicians who have not been interested before.

One thing to be remembered is that we act only at the suggestion or with the approval of our corresponding medical society.

Another thing to remember is that to really accomplish big things we must be an active and a good strong organization so that we are a power.

MRS. G. HENRY MUNDT,  
President.

#### THE MEDICAL SOCIETY OF THE COUNTY OF KINGS, NEW YORK, TO TAKE ACTION AGAINST RECENT PROPAGANDA FOR COMPUL- SORY HEALTH INSURANCE

Under date of February 20, 1928, the following was sent to each member of the County of Kings:

*Resolved*, That the Medical Society of the County of Kings, in meeting assembled February 21, 1928, declares that any attempt by Delegate, Committee or other body of the State Society to use its Annual Meeting at Albany, May 22, 1928, by Open Forum or otherwise, or to use its machinery or Journal to propagandize *Compulsory Health Insurance* will be regarded as a breach of trust and a violation of the people's right to protection against vicious social policies which so degenerated the morale and service of English Doctors that 1,400 struck! (1923) and "the deaths of women in childbirth from sepsis had increased alarmingly" in 1922, and be it further

*Resolved*, That copy of this resolution be sent

to the State Society and to every County Society and to the Press.

DOCTOR: Please attend the meeting and help adopt this Resolution.

Gratefully,

JOHN J. A. O'REILLY.

February 20, 1928.

#### CLUB WOMEN AND WORKERS ARE BE- ING DECEIVED—DAUGHTERS OF AMERICAN REVOLUTION OB- JECT TO CHILDREN'S BUREAU ACTIVITIES

The ILLINOIS MEDICAL JOURNAL acknowledges with pleasure receipt of a letter, under date of Feb. 9, 1928, from Mrs. John Milton Guy of Danville, Ill. The communication is self-explanatory.

To the Editor:

I wish to acknowledge receipt of the literature you so kindly sent and to thank you for it. Our D.A.R. is stressing the need for "National Defense" this year, and all the red propaganda for antagonism to this doctrine ramifies into every kind of activity.

*Club women and workers in many organizations are being deceived and influenced by those pacifists who are working under cover.* The articles I desired show up these schemes, like the plans in the Children's Bureau for the Sheppard-Towner Bill; the advancement of the "Youth Movement" and *other international activities, opposed to our own constitutional traditions.* We have a library in our own chapter covering much of this propaganda and the copies you sent are to be used in extending information. Apropos of the subject, I heard Carrie Chapman Catt, holding forth over the radio night before last, hoping to reach thousands with her socialistic doctrines. They are busy, we need to be.

Very sincerely yours,

Nannie K. Guy.

#### ACCORDING TO INSTRUCTIONS

The merchant was reprimanding one of his clerks severely for cheating a new customer.

"But, sir," said the clerk, "You said you wanted your business run according to the Bible."

"I do," said the merchant, "But you wouldn't call cheating going according to the Bible, could you?"

"Well," said the clerk, "Doesn't the Bible say 'She was a stranger and I took her in'?"



**ILLINOIS STATE MEDICAL SOCIETY****SEVENTY-EIGHTH ANNUAL MEETING**

Stevens Hotel, Chicago

May 8, 9, 10, 11, 1928

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**ILLINOIS MEDICAL JOURNAL**

Charles J. Whalen, *Editor*, Chicago.  
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#### MEETING OF THE HOUSE OF DELEGATES

*Tuesday Evening, May 8, 1928*

Stevens Hotel

9:00—Meeting called to order by President G. Henry Mundt for reports of officers, committees and other business to come before the House.

*Thursday Morning, May 10, 1928*

9:00—Meeting called to order by President G. Henry Mundt for election of officers, committees, delegates to American Medical Association meeting, reports and other business to come before the House

#### SECRETARIES CONFERENCE

*Tuesday Morning, May 8, 1928*

Stevens Hotel

10:00—(Program not yet announced.)

#### GENERAL SESSIONS

*Tuesday Evening, May 8, 1928*

Stevens Hotel

7:30—Call to order by the President, G. Henry Mundt.

Invocation.

Addresses of Welcome.

Report of Chairman of Arrangement Committee, N. S. Davis, III.

Address, (Subject to be announced).

Olin West, Secretary, American Medical Association, Chicago.

*Wednesday Evening, May 9, 1928*

Stevens Hotel

7:30—President's Address, G. Henry Mundt,

Illinois State Medical Society, Chicago.

8:00—Oration in Surgery. (Orator and subject to be announced.)

*Thursday Evening, May 10, 1928*

Stevens Hotel

8:00—Oration in Medicine. (Orator and subject to be announced.)

*Friday Afternoon, May 11, 1928*

1:30—Induction of the President-Elect, John E. Tuite, Rockford.

1:45—Report of the House of Delegates.

#### PRELIMINARY PROGRAM

##### SECTION ON MEDICINE

*Tuesday, May 8, 1928*

##### SCIENTIFIC PROGRAM AT THE STEVENS HOTEL

2:00 P. M.—Epilepsy; Victor A. McClanahan, M. D., Aledo. Discussion opened by Peter Bassoe, M. D., Chicago.

2:30 P. M.—Indications for Blood Chemistry; C. R. Smith, M. D., Decatur. Discussion opened by E. J. Stieglitz, M. D., Chicago.

3:00 P. M.—The Heart in Goiter Conditions; Frank Deneen, M. D., Bloomington. Discussion opened by Walter W. Hamburger, M. D., Chicago.

3:30 P. M.—Recent Studies in the Medical Treatment of Arthritis; Charles P. Emmerson, M. D., Indianapolis. Discussion opened by L. H. Mayers, M. D. and D. E. Markson, M. D., Chicago.

4:30 P. M.—A Medical Martyr of the Eighteen Sixties; Charles B. Johnson, M. D., Campaign. Discussion opened by Irving S. Cutter, M. D., Chicago.

*Wednesday Morning, May 9, 1928*

##### CLINICAL MEETING AT NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

9 A. M. to 12 M.

Physiology of the Gall Bladder; Dr. A. C. Ivy, Nathan Smith Davis, Professor of Physiology, Eric Oldberg, Grant Kloster, and A. C. Leuth.

Symposium on Cardiac Failure, illustrated with cases; James G. Carr, M. D., and N. C. Gilbert, M. D.

Symposium on Toxic Thyroid Disease; Drs. C. A. Elliott, Harry M. Richter, Allen B. Kanavel, James P. Simonds.



The Role of Bacteria in the Intestine; Dr. Arthur I. Kendall.

Myostatic Contractures; S. W. Ranson, M. D.  
Tropical (?) Sprue in Illinois; William H. Holmes, M. D.

Endocrine Disturbances in Childhood; Isaac A. Abt, M. D.

Trigeminal Neuralgia; Loyal E. Davis, M. D.  
Light Therapy—Uses and Abuses; Drs. W. T. Bovie and John S. Coulter.

Vitamine B. Deficiencies; Dr. Chester J. Farmer.

Post-Encephalitic Phenomena; L. J. Pollock, M. D.

In the final program these subjects will be grouped so that there will be three or four clinics and demonstrations, running simultaneously.

*Wednesday Afternoon, May 9, 1928*

CLINICAL MEETING AT THE UNIVERSITY OF CHICAGO SCHOOL OF MEDICINE

Assembly Room, Pathology Building

2:00 P. M.—Pernicious Anemia; O. H. Robertson, M. D., Prof. of Med.

3:00 P. M.—Nephritis; F. C. McLean, M. D., Prof. of Med.

4:00 P. M.—Diabetes Mellitus; L. Leiter, M. D., Assist. Prof. of Med.

4:45 P. M.—Rheumatic Fever; C. P. Miller, M. D., Assist. Prof. of Med.

Assembly Room, Room 137, Medical Clinic

2:00 P. M.—Clinical Lectures and Demonstrations, Diseases of the Nervous System; Friederich Hiller, M. D., Assoc. Prof. of Med.

3:45 to 5:30 P. M.—Clinical Lectures and Demonstrations, Syphilis and Diseases of the Skin; S. W. Becker, M. D., Assist. Prof. of Dermatology.

Surgical Amphitheater, Sixth Floor

2:00 to 3:30 P. M.—Medical Conference; Toxic Goiter; Joseph L. Miller, M. D., Clin. Prof. of Med., George M. Curtis, M. D., Assoc. Prof. of Surg., and others.

Amphitheater, Pathology Building

4:00 to 5:30 P. M.—Clinical Pathological Conference; H. G. Wells, M. D., Prof. of Pathology, F. C. McLean, M. D., Prof. of Med., and others.

Lecture Room, Physiology Building

2:00 P. M.—Demonstrations by members of

the Department of Physiology; Anton J. Carlson, Ph. D., Prof. of Physiology, presiding.

3:45 P. M.—Demonstrations by members of the Department of Physiological Chemistry and Pharmacology; F. C. Koch, Ph. D., Prof. of Physiological Chemistry, presiding.

*Thursday Morning, May 10, 1928*

CLINICAL MEETING AT THE COOK COUNTY HOSPITAL

8:30 A. M.—Agranulocytic Angina; Dr. Trace.

8:50 A. M.—Diagnosis of Early Pulmonary Tuberculosis; Dr. Lewison.

9:10 A. M.—Encephalitis; Dr. Grinker.

9:30 A. M.—Diabetes, Dr. Keeton.

9:50 A. M.—Alkalosis; Dr. Portis.

10:10 A. M.—Neuromuscular Disturbances in Children; Dr. Blatt.

10:30 A. M.—Treatment of Gastric Ulcer; Dr. J. Meyer.

10:50 A. M.—Cryo-Cautery; Dr. Zeisler.

11:10 A. M.—Artificial Pneumothorax in Treatment of Tuberculosis; Dr. Taub.

11:30 A. M.—Albuminuria and Nephritis in Children; Dr. Calvin.

8:30 A. M.—X-Ray; Dr. Matthews.

8:50—A. M.—Artificial Pneumothorax in Tuberculosis; Dr. Schupman.

9:10 A. M.—Medicine; Dr. Unger.

9:30 A. M.—Ultraviolet Rays in Convalescence; Dr. Kobak.

9:50 A. M.—Chronic Ulcerative Colitis; Dr. Goldsmith.

10:10 A. M.—Dermatology; Dr. E. A. Oliver.

10:30 A. M.—Newer Treatment of Syphilis; Dr. Yudelson.

10:50 A. M.—Allergic Diseases; Dr. Feinberg.

11:30 A. M.—Renal Function Tests; Dr. Volini.

*Thursday, May 10, 1928*

CLINICAL MEETING AT THE UNIVERSITY OF ILLINOIS RESEARCH AND EDUCATIONAL HOSPITAL

1:00 P. M.—Toxemias of Pregnancy, Dr. Falls; Neurologic Clinic, Dr. Hassin; Pediatric Clinic, Dr. Hess.

2:00 P. M.—Metabolic Diseases, Dr. Keeton; Medical Clinic, Dr. Williamson; Dermatology Clinic, Dr. Senear.

Demonstrations of Medical Cases to Small

Groups; Drs. Moore, Singer, Birch, Foley, Streicher.

# ORATION IN MEDICINE AT THE STEVENS HOTEL AT 5:00 P. M.

*Friday Morning, May 11, 1928*

## SCIENTIFIC PROGRAM AT THE STEVENS HOTEL

9:00 A. M.—Recognizing Tonsillar Infection; Fred. M. Meixner, M. D., Peoria. Discussion opened by D. C. Sutton, M. D., Chicago.

9:30 A. M.—Achlorhydria, Types Causes and Treatment; F. Garm Norbury, Jacksonville. Discussion opened by Ralph C. Brown, M. D., Chicago.

10:00 A. M.—Some of the Clinical Features of Mediastinal Tumors; Fred M. Smith, Iowa City. Discussion opened by Theodore Ticken, M. D., and Hollis E. Potter, M. D., Chicago.

11:00 A. M.—Address by J. L. Sherrick, M. D., Monmouth, Chairman of the Section on Medicine.

11:30 A. M.—Some Aspects of Chest Disease and Their Diagnosis; M. H. Winters, M. D., Galesburg. Discussion opened by E. A. Gray, M. D., and J. Brennemann, M. D., Chicago.

12:00 A. M.—Radium in Carcinoma of the Mouth; W. A. Pusey, M. D., Chicago. Discussion opened by Herbert A. Potts, M. D., Chicago.

The following clinics are to be conducted by the Faculty of Loyola University School of Medicine for the meeting of the Illinois State Medical Society to be held in the Amphitheatre of Mercy Hospital, Chicago, on Friday afternoon, May 11, 1928:

Drs. E. L. Moorhead, L. D. Moorhead, Charles L. Mix—Goiter.

Dr. Clement L. Martin—Proctology.

Dr. Henry Schmitz—Gynecology and Radiology.

Dr. John B. O'Donoghue—Gall Bladder Infections.

Dr. Charles F. Sawyer—Ileus.

Dr. Fred M. Drennan—Duodenal Ulcer with Demonstration of Cases.

Dr. Italo F. Volini—Lantern Slide Demonstration—Cardiac Irregularities by Electrocardiograph.

Dr. Robert S. Berghoff—Differential Diagnosis of Chest Diseases.

Dr. William J. Pickett—Gall Bladder.

## PRELIMINARY PROGRAM

### SECTION ON SURGERY

*May 8 to 11, 1928*

Monday, May 7.—Clinical demonstrations at various Hospitals throughout the city.

Tuesday, May 8.—Forenoon. Clinics at various Hospitals.

Afternoon.—Scientific papers will be read at the hotel as follows:

1:00—Treatment of Fractures. T. A. Johnson, Rockford.

1:30—Diagnosis and Treatment of Fractures of cervical spine. (Illustrated with lantern slides.) E. S. Murphy, Dixon. Discussion opened by Frank F. Hoffman, Chicago.

2:00 — Hemolytic streptococcus Septicemia. Edmund C. Ross, Decatur. Discussion opened by Charles H. Parkes, Chicago.

2:30—The Deadly Upper Lip Infections. H. J. Jurgens, Quincy. Discussion opened by R. C. Crain, Chicago.

3:00—Dr. Perry W. Toombs, Memphis, Tenn. From Dept. of Obstetrics. (By invitation.) Univ. of Tenn.

4:00—Placenta Previa. D. D. Smith, Decatur. Discussion opened by Gilbert Fitzpatrick, Chicago.

4:30—What I Learned on Sixty Caesarian Sections. J. H. Macon, Peoria. Discussion opened by Le Roy McLaughlin, Chicago.

*Wednesday Morning, May 9, 1928*

8:00—The More Common Diseases of Anus and Rectum and Their Surgical Treatment. C. Franklin James, Peoria.

8:30—Solitary Hemorrhagic Cysts of Kidney, Associated with Malignant Neoplasm in Infancy. Albert E. McEvers, Rock Island. Discussion opened by Claude Weldy, Chicago.

9:00—A Plea for More Radical Surgical Procedure in Thyroid Adenoma. J. W. Dreyer, Aurora. Discussion to be opened by Hugh McKechnie, Chicago.

9:30—Prostatectomy. Wm. B. Peck, Freeport. Discussion to be opened by John S. Nagel, Chicago.

10:00—Carcinoma of the Pancreas. Clifford N. Collins, Peoria. Discussion to be opened by E. M. Brown, Chicago.

10:30—Some Newer Phases of Plastic Surgery. Frederick B. Moorehead, Chicago.



11:00—Dr. Irvin Abell, Louisville, Ky. (By invitation.)

*Wednesday Afternoon, May 9, 1928*

1:00 to 4:00—At Northwestern University Medical School Clinical Conference and demonstrations by members of the Faculty.

*Thursday Morning, May 10, 1928*

8:00 to 12:00—Research Hospital, University of Illinois. Clinical program by medical staff.

*Thursday Afternoon, May 10, 1928*

1:00 to 4:00—Cook County Hospital Clinical program by members of Staff.

*Friday Morning, May 11, 1928*

9:00 to 12:00—University of Chicago Medical School Clinical program by members of Faculty.

*Friday Afternoon, May 11, 1928*

2:00 to 4:00—Loyola University Medical School at Mercy Hospital Clinical program by members of Staff.

*Saturday Morning, May 12, 1928*

Clinics at various hospitals.

PRELIMINARY PROGRAM

SECTION ON EYE, EAR, NOSE AND THROAT

*Monday, May 7, 1928*

Morning and Afternoon—Hospital clinics, auspices of Chicago Ophthalmological and Chicago Oto-Laryngological Societies. Details to be announced later.

Evening, 6:30 P. M.—Annual Banquet to be held in conjunction with above Societies. Stevens Hotel, 6:30 P. M. (Please make reservations now with Dr. C. F. Yerger, Chicago, Ill., 4458 W. Madison St.)

*Tuesday, May 8, 1928*

Morning and Afternoon—Hospital clinics, auspices of Chicago Ophthalmological and Chicago Oto-Laryngological Societies.

Evening—General Open Meeting.

*Wednesday, May 9, 1928*

Morning, 8-12 A. M.—Scientific Program.

Afternoon, 1-5 P. M.—Scientific Program.

Evening, 6:00 P. M.—President's banquet. Oration on Surgery. Stag.

*Thursday, May 10, 1928*

Morning, 9-12 A. M.—University of Chicago. Ophthalmology, "Clinical and Pathological Demonstrations," Billings Hospital, Eye Clinic, Dr.

E. V. L. Brown and staff, Oto-Laryngology. "Clinical and Pathological Demonstrations," Billings Hospital, Ear, Nose, Throat Clinic, Dr. H. Fielding Wilkinson and staff.

Afternoon, 2-5 P. M.—Rush Medical College. Ophthalmology, from 2-3 P. M. Dr. Robert von der Heydt will demonstrate cases with the slit lamp and Gullstrand Ophthalmoscope.

From 3-4 P. M. Dr. Wm. Geo. Reeder will give his regular clinic with special cases.

From 4-5 P. M. Dr. W. H. Wilder a clinic with special cases.

Thursday, 2-4 P. M.—Oto-Laryngology—1. Inspection of the out-patient department in which the work has been organized to provide graduate training in the specialty. Drs. Daniel B. Hayden and Richard W. Watkins. Second Floor, Senn Hall.

2. Demonstration of patients. North Amphitheater, Sixth Floor, Senn Hall. 2-3 P. M. Dr. Geo. Torrison.

3. Demonstration of Bronchoscopy on Dogs. North Amphitheater, Sixth Floor, Senn Hall. 3-4 P. M. Dr. Elmer Hagens.

Thursday Evening—5 P. M.—Oration on Medicine. College and class reunions.

*Friday, May 11, 1928*

Morning, 9-11 A. M.—Northwestern University Medical School. Oto-Laryngologic Clinic—Otosclerosis (pathological specimens).—Dr. J. Gorden Wilson.

Maxillary Sinus Operation with new Instrument (with cases).—Dr. S. B. Munns.

New Plastic Surgery with the Radical Mastoid Operation (with cases).—Dr. Wm. Joyce.

Bronchoscopy with Special Cases—Dr. John F. Delph.

Intra Nasal Tear Sac Operation (with cases).—Dr. C. F. Bookwalter.

11 A. M.-2 P. M.—Northwestern University Medical School. Ophthalmologic Clinic.

1. Demonstration with the Gullstrand Slit Lamp and corneal microscope of selected cases of external diseases of the eye.—Dr. Ralph Davis.

2. Demonstration with the large Gullstrand binocular ophthalmoscope of selected cases of fundus diseases.—Dr. William A. Mann, Jr.

3. Demonstration of perimetry and campimetry with the Ferree-Rand perimeter and other instruments.—Dr. E. Selinger.

4. Demonstration of selected histopathologic preparations.—Dr. C. H. Lockwood.

5. Demonstration of the skiascopy with cylinders, and Velonoskiascopy.—Drs. Thomas Keckich & Gail Soper.

6. Demonstration with the Troncoso Gonioscope of normal and pathological conditions at the chamber angle.—Dr. Wm. F. Moncreiff.

*Saturday, May 12, 1928*

Morning, 9-11 A. M.—University of Illinois Ophthalmology. Demonstration of Methods Post-Graduate Teaching of Ophthalmology.—Dr. Hallard Beard and Staff.

11 A. M.-4 P. M.—University of Illinois Otolaryngology. Clinic with Special Cases.—Drs. Pierce, Lederer and Staff.

### SCIENTIFIC PROGRAM

8-12 A. M.

1. Chairman's Address, Dr. C. F. Yerger, Chicago, Ill.

2. Can Diathermy Remove Cataract? Dr. F. L. Alloway, Champaign, Ill. Discussion—Dr. C. R. Fringer, Rockford, Ill.

3. Cataracts; Pre-operative and Post-operative, Dr. R. H. Woods, La Salle, Ill. Discussion—Dr. J. H. Roth, Kankakee, Ill.

4. Difficulties in Diagnosis of Tuberculosis of the Eye. (By invitation).—Dr. W. C. Finnoff, Denver, Colo.

5. Acute Glaucoma, Dr. M. Goldenburg, Chicago.

6. Chronic Glaucoma, Dr. W. H. Wilder. Discussion—Drs. Harry Gradle and Thomas Faith, Chicago, Ill.

7. The Training of an Eye, Ear, Nose and Throat Specialist, Dr. Leo Steiner. Discussion—Dr. E. K. Findley, Chicago, Ill.

8. Gastric Disorders of Asthenopic Origin, Dr. J. E. Lebensohn, Chicago, Ill. Discussion—Dr. T. D. Allen, Chicago, Ill.

9. Emphysema of the Eye-lids, Dr. W. E. Shastid, Pittsfield, Ill. Discussion—Dr. C. A. Hercules, Harvey, Ill.

1-5 P. M.

10. Vulnerable Areas in the Facial Nerve, Dr. A. H. Andrews, Chicago, Ill. Discussion—Dr. A. A. Hayden, Chicago, Ill.

11. Aural Vertigo, Dr. J. G. Wilson, Chicago, Ill. Discussion—Drs. Norval Pierce and Geo. E. Shambaugh, Chicago, Ill.

12. Radio-lucent Foreign Bodies in Broncho-

scopy and Esophagoscopy, Dr. Edwin McGinnis, Chicago, Ill. Discussion—Dr. H. R. Watkins, Bloomington, Ill.

13. Surgical Correction of Crooked Nose. Dr. S. Salinger, Chicago, Ill. (Lantern Demonstration). Discussion—Dr. C. F. Burkhardt, Effingham, Ill.

14. Surgical Diathermy, Dr. J. C. Beck, Chicago, Ill. Discussion—Dr. G. W. Boot, Chicago, Ill.

15. Ivory Implant in Atrophic Rhinitis, Dr. L. Bernheimer, Chicago, Ill. Discussion—Dr. C. B. Welton, Peoria, Ill.

16. The Occult Pathologic Antrum, Dr. A. Corwin, Chicago, Ill. Discussion—Dr. I. Ostrom, Rock Island, Ill.

17. Rhinological Problem in Bronchial Asthma, Dr. Burton Haseltine, Chicago, Ill. Discussion—Dr. D. W. Myers, Ann Arbor, Mich.

18. Reactions Resulting from Intra-nasal Surgery (A laboratory and clinical study), Drs. A. R. Hollender and H. M. Cottle. Discussion—Dr. Frank Novak, Jr., Chicago, Ill.

19. Decortication of the Mastoid, Dr. N. Schoolman, Chicago, Ill. Discussion—Dr. J. S. Clark, Freeport, Ill.

20. Barbituric Hypnotics in the Treatment and Prophylaxis of Rhinologic Cocaine Intoxication, Dr. M. Reese Guttman, Chicago, Ill. Discussion—Dr. J. C. Beck, Chicago, Ill.

### SECTION ON PUBLIC HEALTH AND HYGIENE

A. A. Crooks, *Chairman*, Peoria.

E. W. Mosley, *Secretary*, Chicago.

The Relations which should exist between the Medical Profession and Public Health Officials and Workers—Samuel Wallace Welsh, Montgomery, Ala.

The Control of Interstate Waterway Supplies—John Monger, Columbus, Ohio

The Tennessee Plan for Tuberculosis Control—Eugene Lindsay Bishop, Nashville, Tenn.

Modern Tendency in Public Health Organizations—C. St. Clair Drake, Chicago, Illinois.

Health Departments and their proper relations to the private practitioners—Arnold H. Kegel, Chicago, Illinois.

Water Supply and Purification—F. W. Mohlman, Chicago, Illinois.

Medical Leadership in School Medical Inspection and Health Service, Wm. A. Howe, Albany, New York.



The Pathology and Clinical Manifestations of Polio-Myelitis—J. J. McShane, Springfield, Illinois.

Tularemia—Tom Kirkwood, Lawrenceville, Illinois.

Pasteurized Milk and Sanitary Control in Illinois—Mr. Harry F. Ferguson, Springfield, Illinois.

Organization and Maintenance of Whole Time County Health Unit—W. H. Newcomb, Jacksonville, Illinois.

The detailed program of this section will be published in the April issue of the ILLINOIS MEDICAL JOURNAL

#### SECTION ON RADIOLOGY

Harold Swanberg, *Chairman*, Quincy.

E. G. C. Williams, *Secretary*, Danville.

*Tuesday Morning, May 8, 1928*

General Radiologic Clinics, 10:00-12:00, St. Bernard's Hospital—B. C. Cushway.

*Tuesday Afternoon*

1:30-3:00

1. Symposium on Anatomical Variations Observed in the Symptomless Spine.
2. The Anatomy and Physiology of the Normal Vertebrae and Pelvis—E. J. Carey, Milwaukee.
3. Radiological Studies of the Symptomless Spine—B. C. Cushway, Chicago; R. J. Maier, Chicago.
4. Significance of the Anatomical Variation of the Symptomless Spine from the Surgical and Industrial Standpoint—Wm. H. Bohart, Chicago.

3:00 P. M.

5. Paper, Subject to be Announced—Joseph C. Bloodgood, Associate Professor of Clinical Surgery, Johns Hopkins University Medical School, Baltimore (by Invitation).

4:00-5:30

6. Bone Clinic—Joseph C. Bloodgood, Baltimore.

*Wednesday Morning, May 9, 1928*

Radiologic Clinics

9:00-10:30

7. The Genito-Urinary Tract—Cassie B. Rose, Chicago.

10:30-12:00

8. Radiotherapy and Electrical Resection—

Benj. H. Orndoff, Chicago, Head of Department of Roentgenology, Loyola University Medical School.

*Wednesday Afternoon, May 9, 1928*

(Various Aspects of Radiation Therapy)

1:30-4:00

9. Treatment of Non-Malignant Skin Diseases—H. W. Grote, Bloomington.
10. Indications of Radiation Therapy in Benign Hemorrhages from the Uterus—Henry Schmitz, Chicago.
11. Radium Treatment of Toxic and Exophthalmic Goiter—O. W. Allison, Danville.
12. A New Radium Applicator for Carcinoma of the Cervix—Harold Swanberg, Quincy.

4:00-5:30

13. Radiation Treatment of Malignant Disease with Special Reference to the Saturation Method—George E. Pfahler, Professor of Radiology, Graduate School of Medicine, University of Pennsylvania, Philadelphia. (By Invitation.)

*Thursday Morning, May 10, 1928*

Radiologic Clinics

9:00-10:30

14. The Thorax—Adolph Hartung, Chicago, Head, Department of Radiology, University of Illinois School of Medicine.

10:30-12:00

15. The Gastro-Intestinal Tract—Edwin S. Blaine, Chicago, Associate Professor of Roentgenology, Northwestern University Medical School.

*Thursday Afternoon, May 10, 1928*

1:30-3:00

(Roentgen Diagnosis)

16. Artificial Pneumothorax with High Intra-Pleural Pressure in Patients with Pleural Adhesions—R. W. Dunham, Ottawa.
17. Diagnosis of Diverticulum of Stomach; Report of Cases—P. B. Goodwin, Peoria.
18. Reverse Movement in the Contents of the Duodenum and Probable Significance—B. H. Orndorff, Chicago.

3:00-5:00

(Radiation Therapy)

19. Colloidal Lead Used with X-Ray Therapy in the Treatment of Carcinoma—R. T. Pettit, Ottawa.
20. Preliminary Reports of Some of the Bio-

logical Effects of Roentgen Ray—C. S. Bucher, Champaign.

21. Some Interesting Cases of Cancer and Tuberculosis Treated with X-Ray and Quartz Light—Sam W. Latham, Eldorado.

#### NOTES

The entire program with the exception of the clinics on Tuesday morning, will be held at the Stevens Hotel. The Clinics have been arranged with the aid of I. S. Trostler, President, Chicago Roentgen Society, Chicago.

The invited guests, J. C. Bloodgood and George E. Pfahler, need no special mention to those interested in Radiology.

No new papers can be accepted, although a more detailed program will be published in the April ILLINOIS MEDICAL JOURNAL.

### ANNUAL MEETING OF TUBERCULOSIS SOCIETIES

#### JOINT MEETING OF ILLINOIS TRUDEAU SOCIETY

Robt. H. Hayes, President

Walter C. Martini, Sec'y.

and

#### CHICAGO TUBERCULOSIS SOCIETY

W. H. Watterson, Pres.

S. A. Levinson, Sec'y.

*Monday, May 7, 1928 at 9:00 A. M., the day preceeding annual meeting Illinois State Medical Society.*

Through the courtesy of Dr. Benjamin Goldberg, Secretary of the Board of Directors of the Municipal Tuberculosis Sanitarium of Chicago, the Sanitarium will entertain as guests the Illinois Trudeau Society and the Chicago Tuberculosis Society.

The following clinics by members of the staff will be held at the Sanitarium:

Thoracic Surgery, by Dr. Carl Hedblom.

Genito-Urinary Tuberculosis with Demonstrations of Pathology, by Dr. Charles Morgan McKenna.

New Methods in Sanitarium Control and Treatment of Tuberculosis Individuals, by Dr. Benjamin Goldberg.

Newer Concepts of the Bacteriology and Pathology of Pulmonary Tuberculosis, by Drs. Henry C. Sweaney and Samuel A. Levinson.

### REDUCED FARE ON RAILROADS TO CHICAGO MEETING

The Central and Western Passenger Associations have granted a reduction in rates to those attending the 1928 Annual Meeting of the Illinois State Medical Society in Chicago May 8th to 11th, 1928, on the Certificate Plan.

This rate reduction applies in all cases where the one way fare amounts to 67 cents or more, and for all members of the Society and dependent members of their families. The entire State of Illinois and St. Louis Missouri are included in this action.

By the certificate plan, the following rules are made:

1. Tickets at the regular one way tariff for the going journey may be obtained from May 4th, to 10 inclusive. When purchasing tickets, the purchaser must ask for a Convention Certificate,—not a receipt.

2. Tickets should be purchased at least a half hour in advance of the time of departure of the train.

3. Certificates are not kept at all stations, and inquiries should be made in advance of the meeting so that they will be available, or at least find the nearest station where they can be obtained.

4. Immediately upon arriving at the meeting, and registering, all tickets must be deposited, and when the required number is obtained, they will be endorsed by an officer of the Society and validated by a special representative of the railroads. When the validated certificate is presented at the ticket office, the return ticket will be given at one-half of the regular rate.

It is hoped that all members of the Society, and their families will procure a Convention Certificate when going to the meeting so that there will be no difficulty in obtaining the required number to be assured of the reduced rate.

### SCIENTIFIC EXHIBITS AT THE 1928 ANNUAL MEETING

The Illinois State Medical Society is very fortunate in having as Chairman of the Committee on Scientific Exhibits, Professor J. P. Simonds of Northwestern University Medical School. Dr. Simonds is arranging a large number of Scientific Exhibits which will be of great interest, and one of the interesting features of the meet-



ing. The Medical Schools will be well represented in their various Departments, a number of the larger hospitals, Allied Societies, and a number of individuals doing work of special interest to the medical profession will have a place in the Scientific Exhibits. These will be held in the large Stevens Hotel Exhibition Hall, which also houses the commercial exhibits. We predict at this time, that the Scientific Exhibits will be visited by everyone attending the meeting. A detailed announcement will be made in the April issue of the JOURNAL, giving a complete list of the many exhibitors, and the nature of the same. Professor Simonds has been spending a great deal of time making the preliminary plans, and the results will be awaited with interest.

### THE COMMERCIAL EXHIBITS

At the 1928 Annual Session of the Illinois State Medical Society which will be held at the Stevens Hotel, Chicago on May 8 to 11, 1928, we believe we will have the finest and largest number of Commercial Exhibits that have ever been shown at a State Society Meeting. Many Commercial organizations and Companies will be represented, many for the first time. All are strictly reliable and ethical concerns worthy of the consideration of every physician in attendance at the meeting. The latest in the drug world, new instruments, electrical supplies, X-ray machines and supplies, optical goods, milk modifiers, and many other things that all physicians are interested in will be among the exhibits. The Exhibition Hall at the Stevens Hotel is the last word in its arrangements and fittings. Everything for the convenience of the exhibitors, as well as patrons is there. We hope that every member and guest who are at the meeting will spend some little time among the exhibits and see what can be done along that line. We have refused a considerable number of concerns willing to exhibit, as they would not conform to the high standards required by the Society. The following concerns have been assigned space for exhibition purposes:

#### EXHIBITORS AT 1928 ANNUAL MEETING

American Optical Company, 10 South Wabash Avenue, Chicago.

Abbott Laboratories, North Chicago, Illinois.

Acme-International X-Ray Company, 711 West Lake Street, Chicago.

Frank S. Betz Company, Hammond, Indiana.

Geo. W. Brady & Company, 809-811 South Western Avenue, Chicago.

Britesun Inc., 1115 North Franklin Street, Chicago.

Burdick Corporation, Milton, Wis.

Camerons Surgical Specialty Company, 666 West Division St., Chicago.

Chemists Supply Company, 174 North Wabash Avenue, Chicago.

Ciba Company, Inc., Cedar and Washington Sts., New York City.

S. H. Camp Company, Jackson, Michigan.

Cutter Laboratories, 440 South Dearborn St., Chicago.

Cilkloid Company, Marshalltown, Iowa.

DeVilbiss Company, Toledo, Ohio.

A. Diadul & Sons, 1562 Milwaukee Avenue, Chicago.

DePuy Manufacturing Company, Warsaw, Indiana.

Dow Optical Company, 30 North Michigan Ave., Chicago.

Deshell Laboratories, Inc., 536 Lake Shore Drive, Chicago.

Evaporated Milk Association, 231 South La Salle St., Chicago.

H. G. Fischer & Company, Inc., 2323-2337 Wabansia Ave., Chicago.

The Holtex Company, 64 West Randolph Street, Chicago.

The Heidbrink Company, 2635 Fourth Ave., South, Minneapolis, Minn.

Horlicks Malted Milk Corporation, Racine, Wisconsin.

Huston Brothers Company, 30 East Randolph St., Chicago.

Hanovia Chemical & Mfg. Co., Newark, N. J.

Kellogg Company, Battle Creek, Michigan.

Kelly-Koett Mfg. Company, Covington, Ky.

Manhattan Coat Factory, 3223 North Halsted St., Chicago.

Laboratory Products Company, Cleveland, Ohio.

Mead Johnson Company, Evansville, Indiana.

Mellins Food Company, 177 State St., Boston, Mass.

Merrell-Soule Company, Syracuse, N. Y.

McIntosh Electrical Co., 223 North California Ave., Chicago.

Moore & Ross Dietetic Laboratory, Columbus, Ohio.

V. Mueller & Company, Chicago.

E. B. Meyrowitz Surgical Instrument Co., 520 Fifth Ave., New York City.

Medical Protective Company, 35 East Wacker Drive, Chicago.

National Dairy Council, 910 South Michigan Blvd., Chicago.

E. L. Patch Co., Boston, Mass.

Chas. H. Phillips Company, New York City.

Pollen Filter Company, 618 Hickox Bldg., Cleveland, Ohio.

Physicians Supply & Drug Co., 427 South Honore St., Chicago.

Riggs Optical Company, 5 South Wabash Ave., Chicago.

Radiograph-Scope Company, Greensboro, North Carolina.

Spencer Lens Company, 5 South Wabash Ave., Chicago.

Sanborn Company, Cambridge, Mass.

E. R. Squibb & Sons, New York City.

Swan-Myers Company, Indianapolis, Ind.

W. B. Saunders Company, Philadelphia, Pa.

G. H. Sherman Laboratories, Detroit, Mich.

Sargent Drug Store, Chicago.

G. D. Searle & Co., 4737 Ravenswood Ave., Chicago.

Scanlon-Morris Company, 58 East Washington St., Chicago.

Standard X-Ray Company, 1932 N. Burling St., Chicago.

J. R. Siebrandt Mfg. Co., 3239 Troost Ave., Kansas City, Mo.

Uhlemann Optical Company, 55 East Washington St., Chicago.

Victor X-Ray Corporation, Robey & Jackson Blvd., Chicago.

Wilson Laboratories, 4221 South Western Ave., Chicago.

Zimmer Mfg. Company, Warsaw, Indiana.

#### THE PRECEPTOR SYSTEM IN MEDICAL EDUCATION FROM THE STANDPOINT OF THE STUDENT

[This editorial, written by a fourth year University student, giving his impressions of the preceptorial extra-mural method of teaching adopted at the University, is, we believe, worthy of this column.—EDITOR'S NOTE.]

At the twenty-sixth annual meeting of the Association of American Medical Colleges held at Chicago, Illinois, February 8, 1916, Dr. Charles R. Bardeen, Dean of the Medical School, University of Wisconsin, in his paper on the "Aims, Methods, and Results in Medical Education" has this to say: "The old apprenticeship system in medical education has some marked advantages which the present system of mass instruction lacks. Is it not possible to restore some of the advantages of the old apprenticeship system without loss of modern scientific training? Can we not utilize a large number of clinical centers for clinical teaching and a large number of progressive men as teachers instead of restricting clinical teaching to a few men connected with large hospitals adjacent to medical schools in large cities?"

Just ten years from that time the preceptor system of clinical instruction was introduced at the medical school of the University of Wisconsin. The plan consists of sending the fourth year medical class to various medical centers throughout the state for a period of three months during the last half of their senior year. A preceptor has been appointed in each medical center, and not more than two or three students are assigned to each preceptor. The preceptor may appoint as many associate preceptors as are necessary to assist him.

The plan is a wide departure from the general scheme of medical education, although a few schools are trying

out similar plans and others have them in contemplation. The question is: "Will it or will it not be successful?" Only after a period of, say, five years' trial will this question be adequately answered. But in the meantime a guess may be hazarded by this one "subject of the experiment" that the answer will be in the affirmative.

It is a real privilege for small groups of students to be under the guidance and direction of men of wide experience and reputation in the private practice of medicine; men whose experience is not confined to medicine in their own center, but whose influence has been felt throughout the state, not only in the medical profession from its scientific point of view but also in the medical education problems of the state, and, may I not say, the nation.

The intimate contact of the student with the preceptor in a medical, as well as a social way, provides a stimulus which could be obtained in no other way. The writer has already found the preceptor plan one of the brightest spots in his undergraduate days. The preceptor is big enough and broad enough and can see far enough ahead to appreciate that he did not arrive at his present enviable position spontaneously; consequently the student has the opportunity to come into the most intimate personal contact with his instructor, and he has the opportunity of observing the intimate personal relationship of physician and patient, which is so absolutely fundamental to sound practice and most certainly essential to the proper care of the patient.

Theodore Billroth said, fifty years ago, "A person may have acquired from books a vast amount of medical knowledge; he may even have memorized from books the technique of its application. Such a person has much knowledge of medicine, and yet with it all he is no physician. He must see and hear a Master's diagnosis, prognosis, and treatment of disease. He must witness the Master's skill in action, in order himself to become a practitioner."—*The Wisconsin Medical Journal*.

#### HARMONIZING THE MEDICAL SOCIETY WITH VOLUNTARY HEALTH AGENCIES

Dr. C. H. Lerrigo, executive secretary of the Kansas Tuberculosis Association, in the *Journal of the Kansas Medical Society* has the following to offer on this perplexing everyday problem:

The Kansas Tuberculosis Association recognizes the fact that the whole work of preventing tuberculosis had its origin in the researches and investigations of pioneers of scientific medicine. It realizes its dependence upon the organized medical profession and by a resolution of its directorate has agreed that all of its clinic work shall be guided by state and county medical societies. Since the 1926 resolution of the Kansas Medical Society in reference to free clinics, this Association has been particular to hold no clinics without first notifying the secretary of the county medical society and asking for indorsement. Not only does it court the guidance and co-operation of county med-



ical societies but it offers to them its nurses and clinic organizers for use in holding chest clinics in any manner meeting with their approval.

The Kansas Tuberculosis Association, conceding the right of the medical societies to regulate clinics, points out that the prevention of tuberculosis is a successful piece of social work that has been carried on throughout the United States for more than twenty years. Under the New York Plan as printed in the *Kansas Medical Journal* for October, 1927, the work of a volunteer society would not necessarily be hampered permanently because of local opposition. The volunteer health society would have a recourse. It could appeal to its state society, and a conference between the state medical society and the state headquarters of the volunteer organization would secure for both organizations fair treatment.

There is another side to the question. The volunteer society may be manned by influential citizens powerful enough to put across, in their own community, practically anything that they indorse. It might be some matter not acceptable to the better judgment of the medical society. In such a case the county society could register an objection through the state medical society that would secure prompt removal of the obnoxious feature, whatever it might be, and do this without local friction of any kind.

Most doctors recognize the fact that organized medicine can do no better than to make friends of the general public. This has been particularly demonstrated in Stafford and other counties where the medical societies have held "open meetings" so that the public may have a more intelligent idea of our work. Surely it will be worth while to put into effect a plan whereby the volunteer society will secure a medical man to guide it in anything pertaining to medical work, and the county medical society will have in its own hands the direction of all enterprises in which the volunteer society puts forth any effort having to do with medical work.

#### THE RIGHT OF PHYSICIANS TO DEDUCT TRAVELING EXPENSES

Senator Arthur R. Robinson of Indiana, at the request of many physicians in his state, has introduced in the Senate an amendment to the Tax Reduction Bill to insure to physicians the right to deduct in the computation of their federal income taxes traveling expenses incurred in attending meetings of medical organizations. The proposed amendment insures to members of trade and business organizations generally this right, which seems to depend now wholly on bureaucratic rulings. If physicians desire the enactment of Senator Robinson's amendment, they must in each state induce their senators to stand solidly behind him in his effort to procure justice. The discrimination against the medical profession in existing law seems now to be frankly admitted by the Commissioner of Internal Revenue. In a recent letter he wrote: "The bureau has not made any general ruling in regard to the deductibility of traveling expenses

incurred by business men, tradesmen, laboring men and professional men *other than physicians.*" Since the Commissioner's ruling against physicians was made in 1922, many questions must have arisen regarding the deductibility of traveling expenses of business men, tradesmen and laboring men, and of professional men other than physicians. Why, then, has it been found inexpedient to promulgate any general rule with respect to traveling expenses for the guidance of non-medical taxpayers? If such a rule is not feasible or necessary for chemists, engineers, labor organizations, corporations and others, why is it feasible and necessary for physicians?

The fact that the Commissioner of Internal Revenue has denied only physicians the right to deduct traveling expenses incurred in attending the meetings of professional, business and trade organizations answers the question as to why no class other than physicians complains of the nondeductibility of these traveling expenses. The Commissioner, as he himself admits, has promulgated no rule denying the right of any other class to deduct such expenses. No other class has been aroused to a defense of its rights.

Although the present injustice rests on the medical profession alone, the situation presents a larger danger. If the Commissioner of Internal Revenue, by his mere fiat, can establish in the case of physicians a conclusive presumption of the nondeductibility of traveling expenses, he can in like manner lay down similar presumptions for other professions and for business and trades generally. To the extent that he can do this, our government ceases to be a government of law and becomes a government by bureaucratic ukase.

Senator Robinson has opened a way to obtain for the physicians of the country the justice for which they have so long been clamoring. It remains now for them to support him in his movement. The likelihood of success is in proportion to the activity of the medical profession. Letters and telegrams to senators urging them to support Senator Robinson should be sent immediately if the movement is to succeed.—*Jour. A. M. A.*, Feb. 11, 1928.

#### STIMULANTS IN OLD AGE

Osborne in the *Medical Journal and Record* says that caffeine in any form, when taken by elderly people, tends to increase nervous irritability and uric acid production and raise the blood-pressure.

Alcohol, in small quantities, tends to quiet the brain and nerves and equalize the circulation; it also has some food value.

Alcohol is preferable to tea and coffee as a mild stimulant for the old.

#### WHEN JUSTICE WINKS

The magistrate bent stern brows on the defendant. "You are charged with exceeding the speed limit last night," he declaimed. "Are you guilty or not guilty?"

"Well, you can decide for yourself, Judge," replied the prisoner. "I was in that car you passed just before they pinched me."—*American Legion Monthly.*

## Original Articles

### THE TREATMENT OF VARICOSE VEINS AND ULCERS\*

EDWARD H. OCHSNER, M.D., B.C., F.A.C.S.

Attending Surgeon, Augustana Hospital

CHICAGO

My reasons for the choice of subject are first, the rapid increase in the last few years in the relative prevalence of varicose veins. Second, because I believe that, on the whole, varicose veins and ulcers are not nearly as well treated as many other surgical conditions. The increase is, I believe, due to the recent change in women's dress. Some forty years ago the Janice Miller dress reform movement stressed particularly the harmful effect of constricting circular garters and urged the adoption of lateral garters fastened to the corset or corsetwaist. In recent years the general discarding of corsets, the reintroduction of circular garters and the practice of rolling the stockings have tended to again impair the return circulation and while some thirty years ago there was a rapid relative decrease in varicose veins and ulcers, I am convinced that in my practice at least the last five years have shown a marked increase.

In the treatment of this condition my observation has been that each surgeon depends too much upon one type of treatment for all cases and does not properly adjust his method of treatment to the varying types of varicose veins and ulcers. In order to adjust the form of treatment to the type of case it is first of all necessary to make a differential diagnosis as to the etiology and pathological anatomy of each case.

Lues is one of the more common causes and unless the lues is effectually treated none of the other forms of treatment will result in a permanent cure. A determination of the question as to whether the superficial veins alone are involved or whether the deep veins alone are involved or whether both are affected must be definitely determined, also as to whether the Trendelenburg sign is or is not present. The Trendelenburg sign depends upon whether or not the valve in the internal saphenous vein is competent or not and the best way to determine the presence or absence of this anatomical con-

dition is to have the patient stand up for a few moments with the internal saphenous exposed and then by making firm pressure with the thumb of one hand at the lower end of the internal saphenous, the blood in the vein is stripped upwards and if the vein remains collapsed between the succeeding group of valves the valves are competent and the Trendelenburg sign is absent. If the vein fills from above it is evidence that the valves are incompetent, are of insufficient size to close the lumen when opened and the Trendelenburg sign is positive.

The question of etiology, too, is of some importance in determining the course of treatment. The most common causes of varicose veins and ulcers are frequent pregnancies, typhoid fever, thrombosis following operations and phlebitis following infection of the lower extremities, traumata, constricting garters, rolled stockings and standing-up occupations.

The treatment depends in the main upon whether the Trendelenburg sign is present or absent and upon the location of the varicosities and ulcers. If the Trendelenburg sign is positive, a permanent cure can only be accomplished by means of a surgical operation the nature of which depends upon the extent of the varicosities and their location and upon the presence or absence of ulceration. In any event, when the Trendelenburg sign is present it is absolutely necessary in order to accomplish a permanent cure to excise a portion of the internal saphenous. This is best done under an effectively applied Esmarch bandage. Ordinarily unless there are numerous collateral branches the extent of the excision of the vein is of minor importance. An excision of two inches of the vein with proper ligation of both cut ends is quite as effective as a longer excision. This operation must in certain cases be supplemented by the Schede or Nussbaum with or without Thiersch skin grafting, according to the condition of the vein. The Schede operation is indicated if there are many large varicosities below the knee and consists of a long oblique incision over the area most involved, through the skin and fat down to the fascia covering the deep muscles. In performing the Schede operation five points are of prime importance: First, prevention of infection; second, the incision must never extend through the muscular fascia; third, it should be oblique; fourth, it must never com-

\*Read before the Section on Surgery, Illinois State Medical Society, Moline, June 2, 1927.



pletely encircle the leg, and fifth, accurate coaptation in suturing the wound must be accomplished. Ligating the vessels is usually not desirable because without ligation the vessels collapse much more rapidly and are much more quickly obliterated and if a large, snugly fitting compression dressing is applied and the leg is elevated before the Esmarch is removed, ligation of the vessels is not necessary to prevent bleeding.

Accurate coaptation of the cut surfaces is very desirable in order to avoid unnecessary delay in healing. If the incision is made circular and completely around the limb and particularly if infection sets in, there is very great danger of subsequent gangrene of the extremity. I have seen this occur twice with operators who failed to heed the above caution. Where the operation has been performed as above outlined and in the presence of an ulcer, it is usually desirable to supplement by adding the Nussbaum and then covering the skin defect with Thiersch skin grafts. The Nussbaum operation consists in incising the skin about 1 c.c. from the edges of the ulcer with the incisions having the form of a square or a parallelogram but not quite meeting at the corners and extending through the skin and fat, if there is any, down to the muscular fascia. This incision obliterates the old endarteritic arteries and veins and compels the formation of new healthy vessels. If the granulations of the ulcer are reasonably clean and firm, curettage of the bed of the ulcer is usually not necessary. If soft and flabby, they should be first curetted away and then complete hemostasis secured before an attempt at skin grafting is made. The area from which the skin is to be taken should be prepared the night before. The skin is preferably taken from the outer surface of the thigh because this gives opportunity for longer grafts and causes less subsequent pain. The surface if hairy should be carefully shaved and thoroughly scrubbed with soap and water, disinfected with 1-1000 bichlorid of mercury, carefully sponged with ether and alcohol, and then a dry dressing applied and carefully held with a bandage over night. The reasons for this particular procedure are that the skin must, of course, be sterile but containing no antiseptics and it must be dry because much thinner and larger skin grafts can be cut when the skin is thor-

oughly dry. The thinner the grafts are the more likely they are to take.

The area from which the skin has been taken is now sponged dry and a dressing of Unna's paint applied. The grafted area is covered by twenty layers of sterile gauze which gauze is firmly and snugly held down with adhesive plaster. This dressing is left on from three to seven days depending upon whether it remains dry or not and the removal of this dressing is of the greatest importance. The gauze must be carefully lifted off with a tissue forceps while the grafts are held back with some other surgical instrument. I have done hundreds of Thiersch grafts where ninety-nine per cent of the surface was completely covered at the end of ten days and completely healed in two weeks. I once grafted an ulcer of 200 square inches by actual measurements where at the end of ten days no uncovered area as large as the end of a lead could be found and I consider less than ninety-five per cent take a relative failure.

When the Trendelenburg sign is absent a case of varicose veins and ulcers can be permanently cured without resorting to surgical operation. In the last twenty-five years I have not operated on to exceed ten percent of all the varicose veins and ulcers that have applied to me for treatment.

There are today thousands of patients suffering from varicose veins and ulcers who for one reason or another will not submit to surgical operations for relief. The procedure consists in the proper application of an Unna's Paint Boot. The first important thing in this application is to have the proper material with which to work and of this the Unna's Paint is the most important for if this is not properly prepared the result will be unsatisfactory.

In order to prepare Unna's Paint take a double boiler (ordinary oatmeal boiler), fill the outer receptacle one-third full of water, then place ten ounces of cold sterile water in the inner receptacle and four ounces of ordinary grocer's sheet gelatine and allow to stand over night at the end of which time the gelatine is fairly well dissolved. Place inner receptacle in outer receptacle and put over slow fire until thoroughly dissolved and hot; then stir in ten ounces of glycerine; then slowly add four ounces of zinc oxide stirring constantly. Whenever the Unna's Paint is required place the double boiler

over a slow fire being sure there is plenty of water in the outer receptacle and heat until melted. Then apply the warm (being careful it is not too hot) melted Unna's Paint to the extremity with an ordinary paint brush about two inches wide about as a painter would paint woodwork with white lead paint, covering the surface of the lower extremity well from the toes to knee but not over the knee. Now put on a woman's white cotton seamless stocking drawing it up snugly so there are no folds. Now cover this over well with the warm Unna's Paint working the paint well into the meshes. (While the dressing is being applied it is well to hold the knee flexed and the ankle at a little less than a right angle.) Over this apply linton gauze bandage about two and one-half inches wide without applying any traction to the bandage and without reversing. Then another coat of paint and repeat this five or six times having the limb thoroughly covered in this way from the base of the toes to the popliteal space. Permit to dry and then powder well with ordinary talcum powder. Over this the stocking can be applied and then the shoe and the patient go about his business. This boot may be left on from one to four months if comfortable until the skin and the veins again become normal. If the extremity is swollen it is necessary to elevate it on a number of pillows for a night before the boot is applied.

If an ulcer exists, cleanse it thoroughly with benzine, then paint the surface with Unna's Paint, cover it with one layer of sterile gauze, another layer of paint, another layer of gauze, until about twenty layers are applied. Then put on the boot as previously directed in simple varicosities, except that in this case the stocking is best omitted. Also in this instance the dressing cannot be left on as long. It may be necessary to remove the first boot in two to four days, or when the secretions begin to get foul. After this the interval may gradually be lengthened. When the ulcer is completely healed the further treatment is the same as for simple uncomplicated varicose veins.

If properly applied this dressing will cure all types of varicose veins and ulcers except two—namely, first, those ulcers which are caused by syphilis in which the treatment must be supplemented by proper anti-luetic treatment, the second in cases where the valves of the internal

saphenous veins are incompetent; that is not large enough to prevent the blood from flowing down past the valves in which case a portion of the internal saphenous vein must first be excised and ligated before the boot is applied and before a complete permanent recovery may be expected.

2155 Cleveland Ave.

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#### PROPER RELATIONSHIP BETWEEN THE STATE DEPARTMENT OF HEALTH, AND THE MEDICAL PROFESSION\*

C. S. NELSON, M. D.,  
SPRINGFIELD, ILL.

It has not been many years since the relationship between the State Department of Health and the medical profession, was an unknown quantity. While it may have been cordial, it was not, to say the least, intimate. Many physicians had very little conception as to the duties performed by the State Board of Health, as it was known at that time. The average physician seemed to assume that when the State Board of Health had signed his certificate to practice medicine and surgery, his duty toward the Board had been performed and further intimate relationship between the two was unnecessary. Very few of the communicable diseases were even reported, to say nothing of an effort to control them. Quarantine was often a joke when an effort was made to establish it, because a health officer was an undiscovered animal in a great many communities. A few disfiguring and fatal diseases, such as smallpox, and diphtheria that struck fear into the hearts of people, were the only infections for which a semblance of quarantine was maintained. Measles, chickenpox, mumps and whooping cough were usually considered a necessary evil and the sooner the children had and were over with them the better. I have had this argument put to me many times. It is true that the law provided for health officials for every foot of territory in Illinois, the supervisor, the assessor and village clerk being the constituted health officials, but many did not know it, and I am inclined to think that some of the officials did not know it themselves at that time.

How different it is today! There is scarcely

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\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Moline, Illinois, June 1, 1927



a physician practicing in the state of Illinois, even in the most remote districts, who does not come into personal contact with a representative of the State Department of Health at least once a year and frequently more often. And the most pleasing feature about this fact is that a large majority of these visits of the representatives of the Department of Health to the practicing physicians, is solicited. With the beginning of an active campaign of disease prevention cooperation and harmony of purpose and effort between the medical profession and the State Department of Health became absolutely necessary to the achievement of success. It is a fact, that the representatives of the Department of Health, in the beginning of this work, met with some opposition on the part of the medical profession, or some of them, and as one might think, not on the ground that such work had a tendency to curtail or rob the private doctor of his yearly income, but with the argument that such work was an entering wedge to state medicine. Nothing could have been farther from the truth. I think I can say with a reasonable degree of assurance, that if Illinois is ever infected with state medicine, it will never come through the State Department of Public Health but through lay health organizations, and for this reason the medical profession should be alert lest the lay organizations lift this work from its proper moorings. It appears to me that the public has shown more activity in supporting lay health organizations, than those led by the professional and legal officers. They have been successful in having taxes levied by law; have shown active interest in "drives" for the support of lay health organizations, and some of these efforts have been put forth for the purpose of trying to control and eliminate, if possible, one disease, when there are many other communicable diseases that in the past have been just as great a plague, but some of which have been conquered by medical science and only need the cooperation of the public to entirely eliminate them. There is only one explanation for this according to my analysis, and that is, the public is beginning to demand better health regulations and the elimination as far as possible of preventable diseases, and it is up to the medical profession to decide whether they wish to take the rein in their own hands and show

at least the same activity in public health matters as the lay organizations have done, which, up to this time, I don't think they have.

For successful achievement any great institution whether it be mercantile, military or medico-sociological, must have a head to it, and while I do not underestimate the good work done by the lay health organizations, it is my opinion that the State Department of Public Health, with the assistance of our splendid army of Illinois physicians, who are, as a class, as good as any in the world, should direct all public health activities. A lady who has always taken a great interest in lay health organizations, once told me that the destruction of lay health organizations would sound the death knell of public health work. I can't see it in that light, but I feel that if the money collected by special taxation, by voluntary contributions, etc., was placed in the coffers of the State Department of Health, added to the meager amount allowed bi-annually by the legislature, much more good could be accomplished for a greater number of people than is being done today with our efforts divided between several organizations.

The practice of medicine is quite different from what it was forty or fifty years ago. The old-time family physician seemed to occupy a place in the hearts of people alongside their spiritual advisors. But how it is today? The old family physician seems to be gradually passing out, which, I think, is a regrettable fact. Since the old family physician welcomed the children into the world, watched and cared for them until they reached puberty, probably was an honored guest at their marriages, and officiated at the coming second generation, it is not surprising that mutual affections burned in the hearts of doctor and patient, and that the physician felt a little more than an ordinary interest in his families. Of course these grand old men knew nothing about preventive medicine as we know it today, but don't you think if they had, they would have warned the parents of these children of the dangers of communicable diseases and used their influence to protect them by vaccination? Of course we still have with us many so-called general practitioners, who attend to the ordinary sickness of their families, but how many times are the specialists called in, which is right and

proper if they feel they are better and more competent to treat certain diseases but this practice doubtless has a tendency to divide the affections of these families between several physicians in contrast with the old family physician upon whose shoulders the whole responsibility rested. In view of these facts, I believe it is up to the general practitioner, in order to regain and hold the affection of the people the old-time physician enjoyed, to take more interest in their future by educating them along the lines of preventive medicine. Don't let a child pass its second birthday without using your influence toward getting that child protected against smallpox, diphtheria, etc., by vaccination. These are not school propositions, especially the prevention of diphtheria, as about seventy-five per cent. of deaths from diphtheria occur in children before school age, and it is the mothers who must be educated, and who are the proper instructors. To my way of thinking, there is no one who can take the place of the physician, and if he is derelict in his duty along these lines, then it is that lay organizations get busy and take this responsibility out of his hands, much to the discredit of the medical profession.

Women's clubs, Parent-Teachers Associations, and many like organizations are now taking quite an active interest in the prevention of diphtheria, and are calling for voluntary speakers and appealing to the Department of Health for speakers to educate them along these lines. I have spoken before quite a good many of these organizations and I am usually surprised to see what little interest the physicians of the village or city take in these meetings.

Preventive medicine as well as curative, is one of the tenets of the medical profession. We are taught it in our colleges by the same professors who teach us curative medicine. It is true I think, that the present day colleges do not give the attention to preventive medicine they should, and what they no doubt will give it in the very near future, but even as it is, any up-to-date physician is amply competent to practice and preach preventive medicine, being guided by government, State and local health officials, who have given more time to these questions than the busy practitioner. With the aid of the medical profession going hand in hand with the government, State

and local health officials toward preventive medicine, what a grand organization this would be? Compare it with a health bureau established at Washington, and probably presided over by a layman. The Sheppard-Towner law passed by congress five years ago, is but a sample of what we may expect in the future if the medical profession remain dormant and permit lay organizations to get control of health regulations. To the credit of Illinois it can be said that up to date we have succeeded in preventing the tentacles of this nefarious law from reaching across its borders, and it is to be hoped that our present congress will show the good judgment of refusing to give this law a new lease on life.

One might say, that the dawn of preventive medicine is just breaking, but when we take a retrospective view of what has been accomplished in the past with the limited knowledge of those times compared with the present, what can we expect in the future? In the pre-vaccination days, in Europe alone, smallpox claimed from one-quarter to one-half million victims every year. Under the same conditions today, and without the great discovery of Dr. Jenner, with our comparatively congested population and rapid means of transportation, what conception could we have of the appalling condition that, no doubt, would exist in our country today? Notwithstanding the fact that vaccination against smallpox has stood the test for a century and a quarter, in 62 different countries, 218,000 cases of smallpox and 50,000 deaths occurred during the calendar year of 1924, and to the shame of the United States, it must be said that the case rate according to reports received, is the highest of any civilized country in the world.

That vaccination would entirely eradicate smallpox if every child born into the world were given this protective agency, is acknowledged by every up-to-date physician, and the Department of Health has sent out tons of literature trying to educate the public to accept and practice this important procedure, and still I have found in some of the rural districts, not five per cent. of the children are protected against smallpox by vaccination. The Department of Health has done its duty. Have the physicians done theirs? If the physicians, on the heels of this literature placed in the hands of their patients, would add their advice and urge people to act, I feel confi-



dent that at least 75 per cent. would be vaccinated and the influence of this 75 per cent. would soon have its effect on the other 25 per cent., until the State would be practically protected against smallpox. The state of Illinois, through the Department of Health, has been a great aid to the physicians in saving thousands of lives from diphtheria through the free distribution of antitoxin; in return, should not the physicians aid the Department of Health in stamping out diphtheria, by urging the mothers to protect their children against this dreaded disease by having the child vaccinated against diphtheria before he or she passes the second birthday? By this cooperation, who would venture to say that diphtheria would not be practically stamped out in a very few years.

Dr. Matthias Nicoll, State Commissioner of Health of New York, says he has "tried faithfully to determine the cause or causes why the general practitioner has seemed to show indifference or hesitancy to take an active part in health campaigns and utilize as a matter of routine established preventive procedures." His conclusions were that probably the most difficult to overcome is the "hesitancy and delicacy on the part of our best practitioners to take any action among their patients which would seem to leave them open to the charge of commercialism, by seeking to increase their practice. The code of ethics of medical practice was framed long before the advent of preventive medicine, and if a physician of the present day would lay himself open to criticism by urging his patients to protect themselves and family against diseases which are known to be absolutely preventable, on the ground of a violation of the code of ethics, our code of ethics is sorely in need of revision."

That a physician should be accused of unprofessional conduct for advising and urging upon his patients the necessity of protecting themselves and family against disease and possibly death, seems to me, too absurd for comment. Our present director of public health, Dr. Isaac D. Rawlings, is a physician, and he is continually and tirelessly urging the public to accept and practice preventive measures against disease; should he be accused of unprofessional conduct?

I feel that it would be out of place to attempt to discuss preventive medicine from a monetary

standpoint, for physicians as a rule have never been considered a mercenary profession. Otherwise they never would have, as in the past, fallen in line so readily and given their cooperation toward preventive medicine that has had such wonderful results in the past quarter of a century. If, however, this thought should ever enter the mind of any physician, stop and consider what it would mean to you, if the present health propaganda and the prevention of preventable diseases should be universally adopted—annual physical examinations, vaccination against smallpox, diphtheria and I think in the near future, scarlet fever and measles. Would it not appear to you that the revenue from this source would far exceed the remuneration received from the comparatively few diseases treated that would naturally occur in the families of your clientele? And besides it would be much more satisfactory.

I consider it would be very unkind to me, to make any severe or harsh criticism against the medical profession, relative to the relationship that exists between them, when I have been in a position to see that vast improvement that has taken place in the past four or five years. I have been thoroughly convinced that any apparent lack of cooperation on the part of the medical profession toward the Department of Health, has been due to a misunderstanding. There is no doubt but what the Department of Health has to face a great many vexatious problems with which the medical profession is not thoroughly familiar. On the other hand, the medical profession have their vexatious problems, especially those in the rural districts, with which the Department of Health may not be always thoroughly familiar. I venture to say, that one of the most exasperating problems of the physicians, especially those in the rural districts, in their aid toward public health work, is the quarantine regulations. They have my heartfelt sympathy. I have had experience enough to know what their troubles are. Attempt at quarantine is looked upon as an effort to curtail the liberty by a certain class of people and they regard it as an encroachment upon their rights as American citizens because it is something that was never thought of a few years ago, etc. With such situations in mind, it does not take a long stretch of the imagination to understand and

realize just what the poor physician is up against when he tries to educate this class of people and get them to abide by the law.

The most unpleasant complaint that comes to me, is to hear a conscientious physician tell me that while he tries to live up to the law rigidly by reporting all contagious diseases and by enforcing quarantine regulations, one of his competitors who lives close enough to encroach on his territory, "never reports anything," but calls a contagious disease "something else," in order to relieve his patrons from the inconvenience of quarantine regulations. I believe some of these complaints to be well founded, but it means of course, one of two things: either dishonesty or ignorance, and in the long run, I don't think either pays, for when the public becomes better educated, and are convinced of the necessity of these measures to protect, not only their neighbor's children, but their own as well, such dishonesty and ignorance will be considered a public menace, and it is then the conscientious and up-to-date physician will come into his own.

The director of public health does not lose sight of the fact that oftentimes quarantine regulations work a hardship on the individuals, and constant efforts are being made to create conditions that will justify a modified quarantine, giving the bread winner of the family at least, all the liberties possible, consistent with public health and safety. In cities that have full time health commissioners, modified quarantine regulations, which offer some relief from the rigid regulations as laid down in the law, are allowed, but rural districts are not yet in a position to enjoy this modification. There is a bill before the present Illinois legislature and has already passed the Senate, which authorizes counties to employ full time health offices. If this bill becomes a law and operative, the people living in the rural districts would have the opportunity to enjoy the same modified quarantine regulations that the people in the cities with full time health commissioners now enjoy.

I sincerely hope and believe that the friendly relationship and cooperation between the Department of Health and the medical profession will continue to grow in fervor until the work of this combination will be universally recognized, greatly to the benefit of all mankind and the glory of scientific medicine.

## DISCUSSION

Dr. J. W. Pollard, Evanston: Twenty odd years of experience in direct contact and association with the Department of Public Health in the State of Illinois has placed Dr. Nelson in a position where he has covered, to my mind, the proper relationship between the State Department of Health on one side and the general practitioner on the other so thoroughly that there is hardly anything that I, a comparative layman, could possibly add to what he has already given you.

As I sat back there and listened to that paper, there were certain queries that came into my mind, and one of them was,—I wonder whether the average resident of the State of Illinois appreciates not only the aims of the State Department of Health but also its efforts along the line of preventive medicine cooperation.

It happens that I was associated with the State Department of Health in the position of district health superintendent for a short time and the experience that I received as the result of that association is something for which I feel positive I shall always be thankful. I did not realize, until my association with the State Department of Health, the nature of the program and the ethicalness, if I may use that expression, of the intentions of the State Department of Health in carrying out that program.

I think, if we stop to realize, we will appreciate the fact that the quarantine regulations, for instance, are an effort on the part of the State health authorities not only to protect the individuals of any community and the individuals of associated communities from the spread of communicable diseases but that they also operate as a direct protection and assistance to the general practitioner. Those of you here at the present time who are general practitioners will agree with me, I believe, that time and again the question comes up between you and your families relative to the possibility of a modification of the quarantine, whether or not, it would be possible under certain conditions to call a certain communicable disease one not communicable in order to relieve the family of the irksomeness of the quarantine. And the fact that you have these definite State regulations on the communicable disease side gives you the opportunity to say, "the State regulations require so-and-so, and I am not privileged to modify those regulations." In such instances, a statement of that sort to the family immediately relieves you of the embarrassment of the situation and the friendly relations between the family physician on one side and the family on the other is still continued.

There is an economic side to the communicable disease situation which I sometimes wonder whether or not has occurred to the average individual. Protection from the spread of communicable diseases not only anticipates the possibility of epidemics, but, in the smaller commercial centers particularly, the presence or the suggestion of an epidemic especially at the holiday season, makes all the difference in the world in the financial returns to that community as a result of their control. I have in mind one little illustration



where a single case of anterior poliomyelitis in the county seat started the possibility of a financial stampede, if I may call it that, right at the holiday season; and it was only through the assurances of the State Department of Health officials that this single case of poliomyelitis would not prove a menace to the community or to the people visiting from the country that peace was reestablished and the community went on its normal way.

Then again, from the communicable disease side, it seems to me that the attitude of the State Department of Health is one of ethical cooperation.

There is one little suggestion that is made in Dr. Nelson's paper relative to the increasing activity of the lay health organizations; and the thought has come to me that the presence of local lay health organizations may be of assistance to an incomplete public health program, for if it happens that lay organizations do spring into existence in a certain locality there is presented a wonderful opportunity to take advantage of that material, of that line of thought, of that psychology and of the finances that back the lay organization, to coordinate the activities of that lay organization by bringing it into closer contact, first, with the local medical fraternity and then to meld it with the local health program.

I see I am overstepping the time. In closing I wish to congratulate Dr. Nelson on the excellence of his paper.

Dr. W. H. Garrison, White Hall: I am very much interested in Dr. Nelson's paper because it comes very closely in contact with the general practitioner, and that is my line of work. I think that one of the most important points made by him, is this, that the friction between the general practitioner, if you might call it friction, and the State board of health is gradually lessening, and it is simply a matter of better understanding until it will have passed away.

As Dr. Nelson says, the State board of health does not always understand the problems and the vexations of the general practitioner, likewise the general practitioner does not always understand what the State board of health has to meet up with.

A rather comical illustration of difference in view point, showing the extremes to which the State board of health sometimes has gone, occurred in my practice, and yet I can see that the State board of health is in a measure justified in doing that very thing. The ruling was that, when you had a case of smallpox, diphtheria or scarlet fever in a building, the entire building or the entire premises was placed under quarantine. I had that sort of case to come up. It was a case of diphtheria in the home of a tenant on a farm of 160 acres. The tenant lived on one corner of the farm, the owner lived on the other corner of the farm, half a mile away. Just across the road lived another farmer who was not on this farm. Now, according to the regulations of the State board of health, that entire farm must be placed under quarantine, including the home of the owner of the farm, but the party across the road need not be placed under quarantine.

I couldn't believe the ruling of the State board of health was such, but we had three representatives of the State board present at a health meeting and I brought that very thing up, and asked them whether that included the residence of the owner of the farm, and they said, "it certainly does, that is the ruling." Then I said, if the farm has a thousand acres, does that make any difference? The answer was, "No, it's all one premises." Then one of the representatives said laughingly, "you might run a barbed wire around the tenant's house, thus making it a separate premises and it would be all right." I wonder if the barbed wire would keep the diphtheria germs inside the yard.

Now, there's the difference. The general practitioner should have some sort of discretion. I stated to them, "I won't do it, gentlemen." And I didn't do it, although I usually try to carry out the rules of the board of health.

Dr. Nelson and I are friends. He is in sympathy with the general practitioner, but he seems to have assumed one thing I think that is not always true, in fact not generally true, viz.: that the general practitioner is slow in educating the family or advising them to avail themselves of the means of prevention through vaccination. I haven't found it that way. I have known of but one exception in my experience as a local health officer. I have never found but one practitioner who was dilatory or slow in that respect. The rest of them are perfectly willing and very prompt to advise their families to make use of vaccination against smallpox, diphtheria and typhoid fever and not a few immunize against scarlet fever.

We find arguments against immunizing put out by the non-medical schools, and by certain lay organizations that oppose vaccination, which are sometimes difficult to overcome. But the regular practitioner is usually very prompt to advise his families to take advantage of these things. Why do the Cults secure the support that they have? One reason is that these cults try by cleverly written literature to educate the public to the view that everything that the doctor does is for the doctor's own individual good and, when the doctor says, vaccinate your child, the impression comes up at once that the doctor wants to make a dollar or two out of it, or perhaps five or ten dollars out of it, if there are several children in the family, thus making the motive of the physician appear to be wholly a mercenary one, and making it difficult for him to secure compliance with his suggestions as to vaccination.

Dr. Nelson, Springfield, Ill., in response: I certainly am gratified to see the discussion arise from my paper because I didn't expect it. I am very much pleased with the comments of approbation and criticism, and I will say, in answer to Dr. Garrison, that I would be very glad to know who that representative of the State board was. It seems funny to me because that would put the State department of health in a position of ridicule because of the reaction among the public. I don't believe the State Department of Health ever endorsed such a thing as that.

## TEACHING CLINIC—LUNG SURGERY\*

CARL A. HEDBLÖM, M. D.

CHICAGO

## PLEURAL EFFUSION

Our first case is an empyema of three years' standing in a young man of twenty. In 1924 he developed the "flu" and on recovering developed dyspnea. He was able to be up and around but was unable to work because of shortness of breath.

His doctor diagnosed pleural effusion and aspirated a quart of serous fluid. A second aspiration yielded a turbid fluid. The patient has had no further treatment.

Now, I am very glad indeed to have the opportunity to show this patient because of the two lessons his case furnishes on the proper handling of patients with a pleural effusion which is of an "idiopathic origin," one which comes about as this did in a gradual, insidious way. Most of us will at once recognize a serous effusion as tuberculous. But what does not seem to be well recognized is that a sero-purulent or frankly purulent effusion may also be tuberculous.

The importance of differentiating between a tuberculous and a non-tuberculous effusion lies in the difference in the treatment. In case of a sterile tuberculous effusion drainage does positive harm. In the pyogenic effusion drainage of some type is imperatively indicated. The only way one can differentiate between the tuberculous and the pyogenic effusion if purulent or sero-purulent is by demonstrating the infecting organism.

The first thing to do is to make a smear and look for the organisms. If one finds pyogenic organisms one can assume that one is dealing with a pyogenic infection. If, on the other hand, the smear shows no organism the next step is to make a culture in ordinary media. It takes only two or three days at most to get positive or negative results from such a culture. If the culture is sterile the assumption is that one is dealing with a tuberculous effusion. Under such conditions, in my opinion, open drainage or drainage of any kind is positively contraindicated. Drainage is sure to introduce secondary

infection and such a secondarily infected tuberculous empyema is the most difficult of all to heal.

Of course, to get positive proof of tuberculosis one has to find the tubercle bacilli in the sediment or do a guinea pig inoculation. But the former is a very difficult and uncertain method and the latter takes too long. One has to decide as to method of treatment. A safe rule to follow is that if the effusion is sterile on ordinary culture it is best not to drain. This patient was not drained. He has since made a complete recovery. About a year after the illness he was able to go back to work, has worked steadily since.

His x-ray plates are on the screen. They show a certain amount of thickening of the pleura, and narrowing of the thorax only. If this patient had had a rib resection and drainage he would probably have had to undergo a secondary plastic operation or he would have at the present time a large cavity with a draining sinus and failing health.

## EMPHYEMA

The second case is also a young man. He had "flu" in 1919. His pleural cavity was aspirated and a little fluid was obtained, the nature of which is not quite clear at the present time. According to the patient, a turbid effusion was withdrawn. An operation was advised but the patient did not see fit to have the operation performed at that time, and he went along until January of this year with a draining sinus which resulted from the stab of the exploratory aspiration which he had in 1919. So for six years he drained pus through a small sinus, about the size of a slate pencil.

He has had fever from 100 to 103 with occasional chills, and showed marked weakness and emaciation.

In January of this year he was operated on by Dr. Shafer. The seventh rib was resected and about 1500 c. c. of thick yellow pus was drained. In April a plastic operation was performed. Drainage was profuse, but a large cavity persisted involving resection of the third to and including the eleventh rib. Part of the erector spinal muscles were used for the purpose of filling in the large cavity. The incision has about entirely healed. The patient has gained

\*Teaching Clinic at Moline, June 1, 1927.



about twenty pounds in weight and weighs now more than he has at any time. He gives every evidence of being in good health. He is going back to work tomorrow.

Here we have then a case of onset of effusion following "flu," with aspiration in the first instance of a turbid fluid which later became purulent.

On the facts before us we cannot decide whether or not this was in the first instance a pyogenic infection or a tuberculous one. It would depend a good deal on whether or not he had a frank pneumonia at the time he had his "flu." One can explain the sequence of events on the basis of either a tuberculous or non-tuberculous effusion.

If it was a sterile effusion the aspiration did not affect it, but the persistence of a sinus gave access for pyogenic organisms into the pleural cavity and so secondary infection. So the assumption would be that we were dealing with a pyogenic infection at least following the sinus formation in the needle stab.

The outstanding object lesson in this case is that an empyema will not heal except the lung is brought out following adequate drainage or the chest wall is collapsed into contact with the unexpanded lung. After a period of six months or more of undrained empyema it is very problematical whether it is possible to get the lung to expand. This patient had an undrained empyema for six years.

The chances are that a decortication would not have been successful or only partially so. It has been my experience that in chronic empyema of this sort, if one places a catheter through the sinus, using Dakin's solution irrigation, and keeps it up a few weeks it will become evident whether or not the lung is going to expand. If it does not expand by that sort of treatment then a decortication is usually of no avail because the lung has lost its power to expand.

The only way to avoid chronicity and large plastic resections of the chest wall is to deal promptly with the acute empyema before pleural thickening and fibrosis of the lung has occurred.

In this case the parietal pleura was  $1\frac{1}{2}$  inches thick according to the history.

The most important cause of chronicity is de-

fective drainage. We have here precisely the cause of chronicity that is most common. Usually a rib resection has been done, but the opening has been allowed to narrow down to a sinus and most of the pus is retained. One of three things happens. The pus breaks through the chest wall "empyema necessitatis" or into a bronchus and the patient coughs up the pus or it remains encysted in the pleural cavity, leading to enormous thickening of the pleura and contraction of it, resulting in a degree of scoliosis in some cases approximating the worst case of Pott's disease that one sees.

The results in this patient coming in as he did six years after the onset of the disease have been all that could be expected. The boy is in excellent condition. He shows very little evidence of deformity. Certainly with the clothes on, I don't believe one could tell which side was involved.

Here are the x-rays (indicating). The lung is shown in partial collapse. The apex is well expanded. The lower part of the lung is collapsed. The empyema cavity is healed.

I have tried very hard in my work with these chronic empyemas to avoid large plastic operations. Dakin's solution irrigation is used for two or three months if necessary before resorting to the plastic operation. Usually a cavity is reduced by such treatment from fifty to seventy-five per cent. If one can save six or eight ribs by taking that length of time it is well worth it. In this case I think the very best result was achieved.

#### PULMONARY ABSCESS

Now, here is a young lady who has had a lung abscess. She had a tonsillectomy on April 11. She went home the next day feeling all right. Four days later she suddenly developed pain in her left chest, had fever and cough. The cough increased and she began to raise purulent sputum. On the twentieth day after the operation she was again admitted to the hospital and was then raising a large amount of sputum. The odor filled the room after she entered it and began to cough. She was running a temperature at that time up to 104 and had signs of consolidation at her left base.

She had one very interesting and very suggestive physical finding, namely, tenderness to pressure over the lower part of the thorax. It is

indicative of the site of pulmonary pathology in cases with this sort of history.

She was kept in the hospital for twelve days and during that time she improved very rapidly so that at the time she left the hospital she was not raising any sputum at all and coughed only slightly. In the two weeks that have elapsed since leaving the hospital there has been no sputum and only a little cough in the morning.

She gained six pounds during the last week and seems in every way on the road to a complete recovery.

This case brings up, first of all, the question of the etiology of pulmonary infection. Was this an inhalation type of infection or was it blood borne or was it carried through the lymphatics? That, as you all know, is a mooted question being discussed at the present time. I shall not have time to go into it here.

Leaving out of consideration the type of infection in this particular case, I should like to say that the answer to the question seems to be that in the majority of the cases of post-tonsillectomy abscess, infection is carried through the bronchial tract.

Recently there has been a certain amount of experimental evidence advanced supporting the idea that the infection is blood borne. Experiments are reported showing that it was impossible to develop abscess of the lung following the injection of the bacteria into the trachea, but abscesses followed placing infected material into the general venous system through which it was carried into the lungs.

I would like to point out that it is to be expected that infected material introduced into the venous system would lodge in the lung and would produce an abscess or some other infectious process and so proves nothing.

It has been found by other investigators that it is possible to produce pulmonary abscess in animals by injecting the infected material through the bronchial tract by precisely the same mechanism as may occur in cases of abscess of the lung.

There is a great deal of other evidence. Most post-tonsillectomy abscesses occur following general anesthesia. A large proportion occur where it is the custom to do tonsillectomies under general anesthesia in the sitting position. Very few occur following local anesthesia. I have operated

for abscess of the lung following extraction of teeth under general anesthesia and found a portion of a tooth lying on the dressing, discharged from the abscess cavity. In a case of that kind the infection was certainly carried through the bronchial tract.

Now, this question of etiology is not an academic one. The importance of it lies in the possibility of prevention of pulmonary abscess. If blood borne then the question as to whether or not the patient is going to develop an abscess following tonsillectomy or other operation is a matter of dispensation of Providence. If, on the other hand, the infection is aspirated in the majority of cases then the responsibility rests largely with the operating surgeon. As long as the question is not definitely settled it behooves those who do tonsillectomies and other operations about the upper respiratory tract to take every possible precaution against aspiration infection.

As to the question of expectant treatment or active radical treatment, if the patient is improving during the progress of a few weeks the indication is to employ expectant treatment. If the patient is holding her own it is justifiable to wait a matter of a couple of months before considering radical treatment. If the patient is not gaining ground or is not showing signs of definite improvement after a few months, then radical treatment is indicated.

The type of treatment will depend upon the type of abscess. I think it is not reasonable to lay down one law for all cases of abscess. If centrally located, conditions for drainage through the bronchus is most favorable. In some such cases bronchoscopic lavage, and pneumothorax collapse is indicated. It seems to me on the other hand irrational to expect large peripherally situated abscesses to drain adequately through a bronchus or to expect to improve drainage materially by bronchoscopy or pneumothorax. Such cases require thoracotomy drainage.

I should like to leave one statement with you, namely, that the treatment of pulmonary abscess depends upon the pathology. The pathology varies greatly and the treatment should be individualized in accordance with it.

#### BRONCHIECTASIS CASE 1

Here is a lady of 42, with a history of a bron-



chitis all her life. The outstanding symptoms are cough with purulent sputum.

I would like to be a bit dogmatic and say I believe the diagnosis of chronic bronchitis that has lasted a period of years is always wrong. It is bronchiectasis.

We are going to be able to prove or disprove this statement now by the new method we have of visualizing the bronchial tract by the injection of lipiodol and the x-ray.

This lady raises at the present time about a teacupful of purulent sputum in twenty-four hours. It has been gradually increasing in amount. A diagnosis of tuberculosis has been made repeatedly, but she has had fifty sputum examinations none of which have shown any tubercle bacilli.

I think that should be sufficient to convince the most skeptical that this is not a case of pulmonary tuberculosis, and bronchiectasis is practically the only other possibility, in the face of a practically negative x-ray (indicating). If we had a dense shadow, we might be dealing with abscess or an empyema with a bronchial fistula.

The two differential points are, first, a patient in pretty good general condition who has had the symptoms for a long period of time; and, second, an x-ray that does not show signs of abscess or empyema with bronchial fistula. The x-ray is negative. One cannot tell by the x-ray whether the process is on one side or the other.

I am sorry we are unable to show you lipiodol x-rays. I think it would show a marked dilatation of the bronchi on the right side. It would probably also show a certain amount on the left side.

There is no surgical treatment for bilateral bronchiectasis. In case of a unilateral involvement much can be done, and the principle of treatment which has been the most effective is pulmonary compression. It can be obtained in part by cutting the phrenic nerve, by pneumothorax, or, by chest wall collapse.

There have been quite a series of cases recently reported of encouraging results following pneumothorax. The difficulty with that method is the fact that it has to be kept up indefinitely. The disease is probably never cured to the extent that the lung can be restored to function.

The most promising and safest treatment is

graded extrapleural collapse of the chest wall by resecting multiple ribs. That is an operation which I have carried out in a considerable number of cases. I have not had a mortality in any of the cases on which I have performed a typical five stage operation. All of the patients have been benefited; some of them to the extent that they have been absolutely cured of symptoms during a period of observation of three to six years.

I think the operation is always worth while if one is dealing with a young individual with a unilateral lesion. In some children the phrenic nerve resection resulting in paralysis of the diaphragm has produced complete symptomatic cure during the period of observation. I think that is the operation of choice, particularly in children in whom a mutilating operation is to be avoided.

#### BRONCHIECTASIS CASE 2

The next patient, who happens to be the aunt of the patient just shown, has essentially the same story. Her x-ray is somewhat the same. It shows a certain amount of suggestive shadows on both sides.

The x-rays in both cases bear out the statement that one cannot make a positive diagnosis by the ordinary x-ray. If one fills those bronchi with lipiodol one can determine not only whether it is unilateral or bilateral, but also the type, whether sacular or cylindrical or fusiform.

The use of lipiodol is the most important recent advance in differential diagnosis in thoracic disease. It is just as important as the use of the bismuth meal in the gastro-intestinal examinations.

This patient, who is seventy years of age, and who looks much younger, seems an example of one important fact, that a patient with bronchiectasis may go on for a number of years in relatively good health.

However, I am not certain that this patient has had bronchiectasis since childhood. She has had a certain amount of dry cough. There has been purulent sputum the last two years only following pneumonia.

The French write about the dry type of bronchiectasis, based on postmortem studies showing bronchial dilatations in patients who have never had sputum.

There are two conditions in bronchiectasis as we use the term. One is a dilated bronchus and the other is an infection, the latter producing the symptoms. It is possible this patient had a congenital dilatation of the bronchi but got the infection only two years ago.

No treatment is indicated in her particular case on account of her age except postural drainage.

In closing I should like to make a plea for accurate, detailed diagnosis in all patients with a chronic cough and purulent sputum. If no tubercle bacilli are found in the sputum, lipiodol x-ray should be made.

I have never seen any bad results from that type of examination, and it will give a positive diagnosis.

### TUBERCULOSIS CONTROL\*

ROBINSON BOSWORTH, M. D.,

ROCKFORD, ILLINOIS

Tuberculosis is a communicable disease as old as civilization itself. As such it rightly should be classified as a community problem. The history of the past twenty-five years, showing as it does numerous instances where communities are waging a favorable control of tuberculosis, establishes, without question, the wisdom of such measures.

Tuberculosis is, in the main, a contact problem, and that contact, in the vast majority of instances, represents the home with those contained within. The disease is pauperizing in its effect, and spreads unchecked to other susceptible members in the family, unless the community, as such, is prepared to step in and assume its obligation. Purely as an economic venture, any community is warranted in offering proper relief from the burden otherwise forced upon the family.

Today, after some twenty-five years of progress, communities representing various units in our political life are more and more accepting the view just expressed, and are making serious attempts to remove the impossible burden from the family and to place it where it belongs as a community problem. History shows that our first serious attempts to control tuberculosis were

state wide in character but limited in type to early, favorable, so-called curable cases of the disease. Disappointing were the results, first, because knowledge regarding tuberculosis and its early diagnosis and the acceptance of early treatments by patients were, to a great degree, lacking, and second, because the open infectious cases remaining uncared for resulted in further spread of infection with increase in the number of potential cases.

The next step brought the smaller unit, the city and county sanatorium, unstandardized, unsupervised, unaided. Open advanced cases were admitted. In the majority of instances, untrained political appointees directed the destiny of these early institutions, with results which all but wrecked the whole hospitalization program. Numerous instances are on record where medical supervision consisted of one or two weekly visits, minutes in extent, where no temperatures or weights were recorded, where thirty-five per cent. of all patients returned dissatisfied to their homes within thirty days of admission. Fortune favored us, however, and the program improved and grew.

The next step provided the proper aiding and supervising influence of a larger unit, the state, resulting in standardization, guidance, and shifting, in a measure, of financial burden. Several states now are in partnership with counties in this attempt at tuberculosis control and, I may add, successfully in partnership, successfully as to results achieved and successfully as to relationship of county with state. This relationship, state aiding county, is, in my opinion, logical. Many counties are, for reasons well known, unable to effect efficient tuberculosis control unaided. Tuberculosis uncontrolled in any subdivision of the state must be of vital concern to the state at large.

There are numerous instances in this state where the tuberculosis problem looms large, in fact, these communities have the largest death rate in the entire state, and still their hands are tied when it comes to instituting effective measures for tuberculosis control to be followed by diminution year by year of tuberculosis morbidity.

Sanatorium beds should be provided in proper numbers and properly distributed throughout the state. History again shows that institutional facilities existing at some distance from the source

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of patients does not result in proper numbers placing themselves under treatment. This is logical for various reasons. The ill desire, in the main, to be close to their homes and families. Public interest, knowledge of tuberculosis and cooperation are not obtained by watching others do things, but on the contrary, by being in on the game with all that this implies. Beds should be available in sufficient numbers and available for all social classes. Tuberculosis is no respecter of class, creed or color. It is absurd to care for a portion with any idea of noteworthy success and force the remainder to spread the disease. There appears to be a direct relationship between the number of tuberculosis cases hospitalized and the total cases existing when it comes to reduction in annual death rates. It may be permissible to refer to figures compiled by the writer showing this relationship and the resulting decline in the tuberculosis rate in another state. In the state of Minnesota during the five year period 1900-1905 there were no beds for tuberculosis patients and the average annual death rate was 104.4, the average annual deaths, 1895.8.

	Beds	Rate	Deaths
1905-1910 .....	70	106.53	2111.4
1910-1915 .....	245	110.2	2368.8
1915-1920 .....	627	102.9	2360.8
1920-1923 .....	1100	77.89	1904.5
1923 alone .....	2200	67.	1600.+

What is the condition in Illinois? Drolet in 1925 published figures to show total deaths 5,549, total beds 3,612, or 1,937 more annual deaths than beds available. At the same time he shows five per cent. of Minnesota beds unoccupied where there were approximately six hundred more beds than annual deaths compared to six per cent. unoccupied beds in Illinois where the annual deaths exceed the total beds by 1,937. Something wrong here.

The total beds available should equal at least the average annual deaths from tuberculosis, all forms, over a period of three to five years. These should be beds for adults. Additional provision should be made for the care of tuberculous children. A community of 100,000 population with average annual deaths of approximately one hundred (which is the usual condition) should have one hundred adult beds as a minimum. However, there will be difficulty in keeping these beds filled unless other work is done. Especially is this true where a new sanatorium opens. You

may educate the responsible people to the need of a sanatorium and obtain one, but you must also educate the tuberculous person to use it—that means field work, city and county nurses trained in tuberculosis. On the other hand, I know of a community showing three hundred odd deaths per year with six hundred beds available and more than one hundred on the waiting list. That community is educated. No urging is required there to make the patient accept sanatorium care.

Institutional facilities should be available and maintained on such high standards of service as to be acceptable to the tax paying class in the community as well as to the group not so fortunately situated financially. Especially is this true in Illinois, where the form of legislation is such as to clearly place all sanatoria on the same non-charitable basis as the public schools. No patient is permitted to pay a penny towards sanatorium care excepting as he is able to contribute by his ability to pay taxes. The sanatorium, then, should be maintained on such standards as will provide proper assistance when required by this tax paying class of patients to the same degree as public schools, fire and police departments.

There are always going to be cases cared for in the homes, and properly so. The number of cases will always exceed the number cared for in sanatoria and hospitals. While the general medical profession has perhaps shown little interest in tuberculosis as a disease and has cared even less to handle such cases, their interest is increasing gradually, due to two factors—more instruction in our medical schools regarding tuberculosis and the presence and the correct relationship of the local sanatorium and its medical director with the local medical men. The fact remains, however, that tuberculosis will for many, many years be a matter for the consideration of the general medical man whether he wants it or not. What should the relationship be between sanatorium and local physicians? The local doctor who specializes in tuberculosis work may handle his patient in the home should the patient be so situated as to be able to provide proper accommodations, nursing care, ventilation, food and isolation from susceptible contacts. We think no one should worry about such a situation. The patient who cannot fulfill the

above will naturally call upon the sanatorium for assistance.

The local man who is not interested in tuberculosis is another consideration, we believe. Personally, we hope such men in the profession will gradually realize that the sanatorium medical personnel are usually in a position to assist him in his care of the tuberculous case in the home, so long as the family is able to fulfill the requirements as to needs of the patients and protection of contacts, thus permitting the family physician the guiding hand, and providing for the patient such special advice and assistance as the trained sanatorium man may be possessed of. In other words, cannot the general medical profession in any locality consider the sanatorium physician a consultant on the case to the advantage of the physician, the patient, and perhaps also to the community?

Efficient tuberculosis control depends upon our ability to supervise and assist all potential cases of tuberculosis from birth until death. The unborn child must be properly planned for and measures taken which will protect it from contagion at and after birth. Plans should be made for proper care of the tuberculous mother that she may have all possible chances to conserve her health. It should be appreciated that there are as many deaths from tuberculosis among infants during the first year of life as there are among adults in any single year-age group. Although tuberculosis is known as a disease of young adult life, the above statement holds good for infants during both the first and second years of life.

Surely ninety-nine per cent. of all infant deaths from tuberculosis are due to maternal and paternal sources of contagion. As the child grows older the percentage of childhood infections with tuberculosis increases rapidly but the seriousness of such infection as to immediate disease and death diminishes. It is entirely probable that in the average Illinois community fifty per cent. of all children have made contact with the tubercle bacillus by the time the age of fifteen has been reached. Among these are the substandard group showing actual tuberculous lesions of bone, joint, gland, etc., and the larger group of potential tuberculous cases represented by those ten per cent. or more underweight.

The proper care of the latter children pre-

vents the development of active disease during childhood, and in addition, permits them to enter adult life immunized, to a certain degree, against further tuberculous infection. The open air school with milk and hot lunches, the summer camp and the preventorium are all a part of the control of tuberculosis directed at the potential case.

There is a smaller group of children suffering from active tuberculosis who should be hospitalized in sanatoria for treatment purposes, and it is amazing how well the child with active tuberculosis of the extra pulmonary type responds to proper care. Pulmonary tuberculosis does not ordinarily develop in children under the age of twelve years, and after that age they may develop the disease as we see it in adults, requiring prolonged treatment and supervision.

The control of tuberculosis among children begins before birth, protects the infant from maternal and paternal contagion, insures safe milk supply, provides the pre-school child with proper environment, affords medical and nursing supervision through the school, correction of physical defects and proper play and exercise.

The potential cases should be protected from further massive infection by removal from sources of contagion until fresh air rooms with lunches, rest periods and summer camps and preventoria restore him to normal status. For the actively tuberculous child we need the sanatorium with its heliotherapy, rest, food, etc.

We agree with Britton that the development of active tuberculosis in the adult depends, not so much upon the occupation of the individual, as upon the manner of living pursued. However, proper working conditions, irrespective of the work at hand, should properly be a matter of concern in the control of tuberculosis. That all commercial establishments are not free from suspicion may be illustrated by the average store in any city in the state. Plate glass front and fire proof back most effectively shut out all fresh air to people who spend one-third of their time within. There is insufficient time to follow this through further excepting to suggest the possibility of great improvement if a little time and effort were properly directed.

There are great possibilities in educating the masses regarding the dangers to health for those in doubtful environment and those spending



long and frequent hours at stimulating pleasures resulting in loss of sleep with its insidious effect on the health. A potential case readily becomes an active one if the candle is burned at both ends.

Early reporting of all cases, as soon as the diagnosis is established, is an exceedingly important step in any program for the control of tuberculosis. At once such cases should be referred to the nursing service for follow up care. The home and its environment should be investigated at once, and corrections or alterations made which will react to the benefit of the invalid and for the protection of others in the home. Instruction should be given the patient and the one to care for him in matter pertaining to sanitation, ventilation, clothing and habits. In general, the advice of the family physician to rest is not often understood by the average patient. To many it means stop work, loaf about the home and putter around, but to the well informed it should mean prolonged, uninterrupted, persistent rest in bed, twenty-four hours per day and seven days per week with bed baths, toilet service at the bed and trays. Whether the patient ultimately goes to a sanitarium or not, the first few weeks after diagnosis is liable to tell the story regarding recovery or failure. The public health nurse untrained in tuberculosis should not be relied upon to supervise such cases.

One of the greatest agencies in any effort to control tuberculosis is the nurse; field nurse, county nurse, tuberculosis nurse, visiting nurse, public health nurse, whatever her title may be. Without her nothing worth while can be accomplished. She is the wheel horse. The public health nurse is not properly understood and her service not fully appreciated.

The public health nurse is expected to teach health to people of all ages, to help prevent the spread of disease, to instruct mothers, children, adults in health habits. But she does far more than this. There are things done, services rendered by the nurses that are not recorded in the annual reports of their work. In the strict sense of the word, these "out-of-the-ordinary" services are not the nurse's duty, but they are performed because there is nobody else to do them.

Recently a compilation<sup>1</sup> of some of these "out-of-the-ordinary" services was made. It was

found that within a comparatively short period of time the public health nurses had:

"Taken a boy who had been 48 hours with a broken leg to 8 doctors' offices before finding a physician for emergency treatment.

Sent to a physician a woman growing blind from venereal disease, ignorant as to the cause, and supposing there was no hope for her eyes. Her sight was saved.

Secured better living quarters for a tuberculous girl who was sleeping in a windowless room.

Made arrangements with neighbors to care for and feed an old couple who were sick and alone.

Secured treatment for a crippled child who had never been to school. Child refused to go to a doctor and his mother would not make him. Persuaded father to consent. Won over mother and child. Child did not keep appointment. Nurse went after him. Child was treated, fitted with braces, and is now attending school.

Cared for and comforted an old woman dying alone.

Advised a woman who believed her sight was lost to go for treatment. An operation restored her sight.

Arranged a home so that the tuberculous father, who was boarding away from home in order not to infect his children, could safely return to his family.

Persuaded a mother who was nervous and tired with "racing around," to stay at home, care for her family, and resume nursing her baby.

Sent a homeless and tired boy to live with a childless couple.

Cared for a sick girl whom the stepmother refused to help.

Arranged for care of baby while the mother was ill with erysipelas.

Made comfortable a dying girl whose only attendant had been a worn out and delicate mother.

Taught a patient to use limbs atrophied from a long stay in bed.

Collected extra clothing for babies that were premature and twins.

Advised of her rights a mother who believed that if her child had tuberculosis he would be taken from her.

Arranged for a sick father to see his children, who were living with his divorced wife's people.

Restored peace and cleanliness to a house

where the second wife, angry at her stepson's interference, retaliated by neglecting her sick husband.

Helped and comforted a stranger whose child had died while her husband was away.

Secured through her nursing committee temporary homes for the children so that the mother with tuberculosis could go to a sanatorium.

Proved to a father that a delicate boy of 14 could not be expected to do a man's work on the farm.

Proved to foster parents that their adopted child was not, as they feared, mentally deficient.

Encouraged a family to move to a better home, where the children would be cleaner and healthier.

Secured a teacher of English for a young Polish woman.

Found a father caring as best he could for a baby born in the fields, left by its mother on an ashpile. Two weeks later the nurse made this entry on the history: "Mother now nursing child."

Helped to train a 14 year old girl who was left in charge of the household after her mother's death.

Persuaded a poor housekeeper to sell produce instead of opening a refreshment stand.

Part of these problems might have been adjusted by other people if the nurse had not been there. Nevertheless the fact remains that it was the nurse who recognized the need and acted. It is just such services as these that bind the nurse so closely to the people whom she serves."

Dr. C. H. Mayo,<sup>2</sup> Rochester: "The public health nurse saves many more dollars than she costs. Public health work today is not accomplishing results because of laws and ordinances. It is successful just insofar as people have correct information and individually and collectively act on that information. The public health nurse is an educator and an organizer. She teaches her people and induces them to put their knowledge into practice. She arouses their interest in the general well-being of the community and their sympathy and cooperation in the enforcing of laws and ordinances."

Dr. W. H. Welch, Johns Hopkins University: "The two chief contributions made by America to the cause of public health have been the Panama Canal and the public health nurse."

Dr. C. D. Lohead, deputy health officer: "The public health nurse is an invaluable aid to the health officer. People generally look on the health officer with suspicion, because in the past many health officers have arbitrarily enforced regulations without taking time to explain why. The public health nurse explains why and by teaching her people she wins their confidence and cooperation in carrying out laws. If every county and every city of 10,000 people or more had a public health nurse, we could build up a health organization in our state which would materially lessen the amount of sickness and reduce the number of deaths."

Dr. O. E. Locken: "The public health nurse, probably better than any other agent can help the practicing physician in educating the public to the need of medical examinations, and to the importance of availing themselves of the measures of preventive medicine. The medical profession can find the greatest assistance from the public health nurse, and the nurse who understands that her duty and training is not to make diagnoses, but to create an interest of the public in its physical welfare, will find that most physicians fully appreciate her value."

#### THE RELATION OF THE PUBLIC HEALTH NURSE TO THE PHYSICIAN<sup>3</sup>

"Official health administration, national, state and local, is so closely linked with the work of the medical profession that the value of the laws and regulations affecting the public health is largely dependent on strict observance by, and whole-hearted support of, the practicing physician.

Public health administration has during the two decades been revolutionized and instead of being a problem, primarily, of law enforcement, it has become one of education and enlightenment. The public health nurse is now recognized as a logical agency through which the public is instructed in matters of personal hygiene and individual health. She has become a portion of a system to give universal understanding to those discoveries of science, the application of which resulted in a distinct lowering of the death rate throughout this country.

The public health nurse does not and cannot act independently. She must cooperate with and depend upon the physician, the laboratory worker, the statistician, the sanitary engineer,



the hospitals, social workers and nutrition experts, all of whom form a single unit in a system of health propaganda and education. The public health nurse is now regarded as a "saleslady of preventive medicine" and in order to accomplish this her contact and association with the physician must be cordial, sympathetic, and with a profound regard for professional ethics. To assume such amicable association is an administrative task—the responsibility of the nurse herself in the rural community where she may be the lone pioneer in preventive medicine.

Necessarily the public health nurse needs personality and understanding. She must be capable of giving general health instruction as distinguished from instruction in any one specialty, and capable of rendering bedside care if necessity arises.

If the health officer makes certain that his organization is directing cases into their proper channels, the physician in turn becomes sympathetic to the work of the department, he is pleased and satisfied as is likewise the public.

There is a necessity for recognizing that a difference in viewpoint may exist at the present time, because medicine has been focussed for centuries upon the cure of diseases, rather than its prevention. The extensive teaching of hygiene, in order to prevent disease, has not as yet become a definitely effective part of the training of physicians; and, as a result, a considerable number of physicians still fail to grasp the force and meaning of preventive medicine as fostered by the public health nurse. Each group is responsible for the prevention and cure of disease in the interest of public health, though physicians tend to serve the individual, while the public health nurse serves the group. There should be a mutual appreciation of the honesty in thought, sincerity in purpose, and the mutual interest which underlies both groups. Each is seeking a field, but for somewhat dissimilar purposes. The nurse primarily aims to retain health and the doctor to restore it. Nevertheless, their common field of service lies in establishing home contacts. In pursuit of their special duties each comes in contact with the service of the other, and hence there is a growing necessity for their greater and more understanding cooperation.

In some of the smaller communities there has developed antagonism on the part of the family

physician toward the public health nurse. While this may possibly occur from poor administrative control, it is more frequently the result of misunderstanding, the doctor not comprehending the mission of the health educator and the latter having taken no steps to inform the physician of her work. It is not the function of the nurse to diagnose or treat. Such is the prerogative of the physician.

Formerly it had been frequently stated that public health work which results in lowering the incidence of disease and teaches people to protect their own health is necessarily an economic detriment to the private practitioner. Theoretically, perhaps, this reasoning is logical, but as a fact it has proved to be fallacious, for experience has shown that no well conceived and wisely administered public health program has resulted in a financial loss to the medical profession. The reverse is the case. Thus, campaigns against tuberculosis, venereal diseases, diphtheria, and the like have all increased the demand for competent private medical advice and service.

Whenever the physician is in the vanguard of the public health movement, he will recognize the nurse as an ally, not a rival. He will know that she will make no attempt to supplant him with the patient and that it is her function primarily to get the patient under medical supervision. He will regard her, therefore, as an efficient ally who will relieve him of tiresome, time-consuming details connected with the case. She will, under his directions, take charge of routine matters for which he has no time, and thus set him free for larger and more important tasks.

The medical profession as a whole is markedly conservative and does not readily or quickly accept innovations in public health procedures, but when once convinced of their value, it is to the everlasting credit of the profession that such procedures have always received hearty support from the great majority of its members."

There are, however, right ways of procedure for field nursing, especially relating to management and maintenance of free tuberculosis clinics. Although by law the people of this State have authorized the free T. B. clinic and all are entitled to share its benefits, still there are first principles which should be observed by the patient and by the field nurse which will do much

to clarify conditions and place this valuable type of work where cooperation and sympathetic backing by the medical profession can be afforded.

Notice should be given to the public that a chest clinic is to be held on a certain date and at a certain place. Patients having no family physician may be invited by the nurse to attend such clinic and even transported there by her. They should be advised as to conditions found and proper steps to take. Patients having a family physician may be invited to the clinic by the physician himself or by the nurse with the approval of the physician, but not otherwise.

Patient appearing at the clinic without consent or approval of family physician in charge may be examined and a full report of such examination with suggestions, sent to the physician only.

There should be an understanding between the nurse and the physician that her services are to be such as to aid the physician in having his directions carried out. There should be an understanding between the clinic head and the physician that the clinic is a consultation service only and that the family physician is still the physician in charge.

#### Summary:

Tuberculosis control begins with the unborn child and follows through to the death of the aged.

All children deserve such environment as will ensure escape from tuberculosis contagion. This may demand removal of the child from the house of the infectious parent or relative.

A safe milk supply is fundamental. Children's physical defects should be corrected, and sub-standard children aided by means of open air schools, hot lunches, rest periods, fresh air camps, etc.

Potential cases of tuberculosis should be restored to normal health and immunized against the development of active tuberculosis by removal from sources of massive infection and by preventorium treatment, etc.

Active tuberculosis in children as well as adults calls for treatment in hospitals as well as at home under some supervision from the trained tuberculosis physician.

The sanatorium program should provide for one bed for each annual death from tuberculosis,

all forms, using the average total deaths for the past three to five years. Additional beds should be provided for children.

The standard of service should be high and should cost approximately three dollars per day per patient.

The sanatoria should average about \$3,500.00 per bed in cost and should, in the main, be fire-proof.

Reporting of cases to health departments is important and should initiate the social service and home nursing program. Home environment should be improved for the immediate benefit of the patient and contacts and for the proper reception of discharged sanatorium patients.

The personnel to carry out a tuberculosis control campaign should be trained physicians and nurses with vision of what is to be done and of their part in this contribution to public welfare.

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#### DISCUSSION

Dr. Robert H. Hayes, Chicago: Disasters with their sudden and spectacular loss of life call forth quick response for aid, while the great destruction of life which public health authorities have to combat is of a slow progressive nature which fails to arouse popular interest or enthusiasm.

As a result, all aid given to public health activities must come from public funds through taxation or special levies. Our problem is to map out a definite program for the utilization of such funds as are available. This program to be most efficient should be mapped out on a centralization plan consisting of a central body, ramified by separate units in the surrounding territories, each of these separate units having its specific duty to perform, and depending upon the parent unit.

Thus, the following measures should be adopted:

The reporting and supervision by health departments of transmissible diseases, particularly tuberculosis, must be carried through from the parent body down to the ramifying units, consisting of public health nurses, local physicians, and the general public at large.

The construction and maintenance by cities, counties and states of institutions for the care and treatment of tuberculosis of all types, similar in plan to the psychopathic institutions which are maintained now by the State of Illinois and in other states, and are controlled by counties and sometimes by municipalities.

The establishment and maintenance of institutions for the prevention of tuberculosis,—such as preventoriums, open-air schools and outdoor camps.

The instruction of the general public, men, women



and children, in methods of avoiding and curing tuberculosis.

And finally, intensive state methods for the prevention and treatment of tuberculosis by nurses and by the medical profession.

I am happy to say that there are now great activities in these lines carried on by local, county and state organizations which may be summarized as follows:

Compulsory reporting of all contagious diseases. Now on our statute books we have compulsory reporting of all cases of tuberculosis, but unfortunately, either through oversight or neglect, very few of the cases, outside of large cities, get into the hands of the local health department.

Next, provision for examination of sputum by public laboratories. This is in itself a necessity. Few local communities are capable of, or have at their disposal, equipment for making the necessary examinations.

Next, the protection of the milk supply and compulsory testing of all dairy herds supplying milk.

Next, provision for the care in hospitals of advanced cases of tuberculosis, and for compulsory removal of such persons from the home, or the removal of children from the home.

Provision for special hospitals for non-pulmonary tuberculous individuals.

Provision in sanatoria for the treatment and education of early cases.

Establishment and maintenance of clinics and dispensaries for the treatment and supervision of patients and their relatives.

Special preventive measures for children who are undernourished or often exposed to massive infection.

Propaganda and education to improve the methods of instruction in our medical schools and nursing institutions on the subject of tuberculosis.

The creation of local and state organizations for the control of tuberculosis, to teach the fact that reduced standards of living increase the development and spread of tuberculosis to recommend measures to improve the health of individuals and communities, by educating the individual on the value of following the principles of modern hygiene good housing conditions, sufficient and properly prepared food; well regulated exercise; avoidance of long hours of work; overwork; proper ventilation in the home and shop.

This program can only be accomplished by the co-operation of all health bodies and by direct per capita taxation, and carried to the masses by publicity through periodicals and newspapers, clinics, public health nurses, and the individual doctors.

Dr. N. O. Gunderson, Rockford: May I bring out one point on the subject of raising funds for county sanitarium work under the Glackin Law. This law limits sanitarium boards as to the amount of money that can be raised. In Winnebago County Dr. Bosworth through the States Attorney's office has devised a plan that can be submitted to the voters of the county at a general election, which permits a tax above the 75c limit.

May I ask that Dr. Bosworth explain this matter.

Dr. Bosworth, Rockford, Ill., in response: I have nothing more in mind in the way of discussion except to dilate a little bit on Dr. Gunderson's suggestion on raising funds. I know of no one fact regarding which there is so much confusion in the State of Illinois as there is concerning the old law on the subject of taxation, what you can do and what you can't do, and how far you can go. I find out something new every day. Now, we have been laboring under the impression up to the last few months that there was no legal way whereby any community could raise a two-mill levy, for instance, for the sanitarium, which tax would be in addition to all other taxes, as the law reads. Now, the Glackin law, the tuberculosis law, today reads and always has read that the sanitarium tax is a special tax in addition to all other taxes, and the interpretation of that phrase has always been, not the lawyer's interpretation, that it was a tax which could be assessed against the people after all other legal taxes had been levied. It has been tried and in every instance the supreme court has knocked it out. However, we did find out this winter that we have an Attorney General's opinion which shows the method by which this matter can be submitted to a vote of the people in the community. If the supervisors, for instance, in your county are now levying the constitutional limit of 75 cents on a hundred dollars, beyond that they cannot go unless they have distinct authorization from the voters. So, on June 6, in our county of Winnebago, the people in the county will vote on the question of levying a special two-mill tax in addition to the 75 cents for sanitarium purposes, over a distinct period of years. You can't vote that indefinitely. You have got to know the number of years that excess tax has to run. You also have to name on the ballot the purpose for which the tax is levied and the amount.

I went down to Indianapolis the other day and met somebody from another county in Illinois and I found that there is a sanitarium in Illinois today that is being run on a three-mill tax, running over a period of twelve years.\* Now, the Glackin law gives authority to the supervisors to make a two-mill levy and I have always thought, and I will guarantee that 99 out of 100 others have always thought, that that was the limit. It is the law, that it does take a vote of the people to place that two-mill tax over and above the constitutional limit of 75 cents on \$100. Now I find that you don't even have to pay any attention to the Glackin law at all so far as the levy is concerned. If you want to make it a three-mill levy or four-mill levy or five, all you have to do is to ask the people to vote a five-mill levy for sanitarium purposes over any period of time you see fit, and, if the people vote it, that is the way to raise your money for sanitarium purposes hereafter.

In almost every instance in the State of Illinois, as far as I know, where they are doing sanitarium work, the institution is cramped for lack of finances.

\*This information was an error. No county tax exceeds 2 mills for sanitarium purposes.

That cramping has been due to the confusion which has existed relative to their ability to raise money. Most of the counties are levying now their legal limit for all purposes, so that the solution in probably every instance in the State is to vote this tax at an election. Now, the question is, how much do you want to raise? Evidently from what has already been done, you can vote anything you wish, as long as you can satisfy the people that you need that amount of money, and you can vote that for any period of time, five years, ten years, twelve or fifteen years.

### SYPHILIS OF THE AORTA\*

ROBERT S. BERGHOFF, M. D., F. A. C. P.,

Clinical Professor of Medicine, Loyola University School of Medicine

CHICAGO

In all the realm of Medicine there is probably no more typical example of a disease diagnosed by virtue of its complications, than syphilis of the aorta. The detection of a disease through its secondary effects, is always deplorable. Especially regrettable is this in syphilitic invasion of the aorta for two reasons: In the first place, because the complications, all of them, are very serious; in the second, because detection is a disease prior to complications, often makes their prevention possible, or at least delays their onset for a considerable period.

Specific aortitis, the precursor of aortic insufficiency, aneurysm and coronary occlusion, is rarely diagnosed early for the following reasons: 1. Failure to appreciate the great frequency of this lesion (fully 60 to 80% of all syphilitics show at autopsy evidence of aortic invasion. 2. The meager and obscure subjective and objective evidence of its presence.

*Pathology of Specific Aortitis.* Syphilitic invasion of the aorta is found in approximately 7% of all autopsies, and in 60 to 80% of all cases infected with syphilis. It follows the primary invasion roughly twenty years, though occasionally much earlier, and in one instance (in the literature), was encountered after seven months. Mes-aortitis syphilitica involves mainly the ascending and transverse portions of the aorta. It stops abruptly at the diaphragmatic line, and rarely passes it, a characteristic which distinguishes this disease from non-specific arteriosclerotic aortitis. The gross changes in the aorta

are as follows: The vessel appears unelastic, dilated, and elongated. The intima shows many radiating retractions with thinning of the walls, leading gradually to a leather-like appearance of this coat. Later, tendon-like folded thickenings, and diffuse bluish-white glassy patches may cover the entire lining of the aorta. Arteriosclerosis changes may be present simultaneously, and may even predominate to such a degree that the syphilitic pathology is masked. The combination of mes-aortitis and arteriosclerosis is frequent in persons over forty.

Histologically, syphilis of the aorta is a chronic, productive inflammatory process involving mainly the media (hence its name, Mes-aortitis), and the vasa vasorum of the adventitia. The median changes consist of a destruction of the elastic tissue and muscle fibres. The pathology of the intima, is an accumulation of lymphocytes and plasma cells around the nutrient vessels. These latter changes are responsible for the necrotic process in the media. If healing sets in, scar tissue replaces elastic and muscle fibres, and stellate projections in the media with consequent retractions in the intima are the end result.

*Symptoms of Syphilitic Aortitis.* While the symptoms and physical findings of uncomplicated specific aortitis are few, yet careful observation with the possibility and frequency of the disease in mind, occasionally renders an early diagnosis possible. Points of value are:

1. Males predominate, 6 to 1.
2. Age incidence—middle life, with the peak in the fourth decade.
3. Subjective symptoms:

A. Pain, ranging from a sense of discomfort to such severity as to call for morphia for relief. The common site is the precordium, and even more typically the base of the heart. Quite frequently it is limited sharply to the border of the sternum, and is associated with a considerable degree of tenderness on pressure. A diagnostic point in a very early stage, is the stationary character of the pain, showing no tendency towards radiation, no attempt to follow either the brachial or cervical plexuses. The pain symptom appears very early in the disease, is at first very mild, occurs frequently, several times a day, sometimes is practically constant, and is encountered in considerably more than fifty per

\*Read before the Section on Medicine, Illinois State Medical Society, Moline, May 31, 1927.



cent. of cases. Its association with the next symptom to be described, makes it the more characteristic.

B. *Dyspnea.* So slight is this initial shortness of breath, that its presence is elicited with difficulty in the history; often it is at first denied. On persistent questioning however, we get the story of labored breathing on insufficient exercise, or an increased rapidity after a full meal, or a transient frank dyspnea after mental excitement. Only exceptionally are we told of a pronounced degree when the patient is at rest. Significant however is the admission of simultaneous pain or discomfort with respiratory distress. Severe, agonizing precordial pain and coincident paroxysmal dyspnea occur at times, though infrequently encountered in early uncomplicated syphilitic aortitis.

C. *Cerebral manifestations.* Most commonly faintness, vertigo, and even nausea occur. This triad alone is however too indefinite, but if coupled with precordial pain and dyspnea, assumes importance.

#### 4. Objective Findings:

a. Evidence of dilatation of the aorta as follows: A dullness in the 2nd and 3rd right intercostal spaces, with a corroboration by means of the x-ray.

b. A short, soft systolic murmur over the aorta, circumscribed, and augmented by exercise.

c. Accentuation of the 2nd aortic tone, encountered as a rule only in the presence of pronounced dilatation.

5. A positive Wassermann.

6. Amelioration of symptoms on intensive specific treatment in the total absence of rest or any remedial cardiac therapy.

#### *Complications of Syphilitic Aortitis.*

1. Aneurysm.
2. Coronary Occlusion.
3. Aortic Insufficiency.

*Aneurysm.* a. *Pathology.* The very nature of the pathology of syphilitic aortitis, explains the inevitableness of aneurysm as an end result. Attacking and destroying the elastic and muscle fibres of the media, a sieve-like structure remains, which under pressure of the blood stream

yields and results in aneurysmal growth. Aneurysmatic dilatation is observed in at least 25% of mes-aortitis syphilitica. After the destruction of the elastic fibres and muscle layer of the media, the newly-formed connective tissue yields to the pressure of the blood in the aorta, and gradually a diffuse, or more frequently a sacculated dilatation of the aorta is produced. With increasing dilatation, the sharp demarcation between the three layers of the wall fades, and a sclerotic membrane of thickened intima and adventitia remains, and forms the wall in which calcification and ossification occur.

b. *Diagnosis.* The symptoms and physical expressions of an aneurysm vary with the location, and it is quite practical to consider them from that standpoint.

1. *Aneurysm of the Ascending Portion:* Dilatation or saculation of this segment of the vessel is associated with few symptoms, but considerable and usually very evident signs, so that it has earned for itself the title "Aneurysm of Physical Signs." While the symptoms are meager, they are fairly constant and characteristic: Pain appears early as a symptom in aneurysm of the ascending aorta. It is at first local, confined to the area of the heart and upper sternum, is fairly constant, and of a dull aching character. It later becomes paroxysmal, intense and boring, and often increases its radius, following the brachial plexus and sometimes the intercostal nerves. Dyspnea is not a constant symptom, but when present, is often very severe and out of all proportion to the size of the aneurysm. Physical signs are as follows: 1. An expansile throbbing tumor in the first intercostal space to the right of the sternum. 2. Evidence of compression of the superior vena cava. 3. Slowing of the pupils, and occasionally inequality of the radials.

2. *Aneurysm of the Arch of the Aorta,* because of its anatomical position, is associated with many symptoms, and has been called the "Aneurysm of Symptoms." Foremost amongst them are: 1. Cough and dyspnea due to compression of the trachea and bronchi. 2. Laryngeal spasm and stridor due to left recurrent laryngeal paralysis. 3. Suprasternal pain, often transmitted into the large vessels of the neck. 4. The symptoms of hemiplegia if the carotid is occluded. The physical findings are few or ab-

sent, and may be limited to a circumscribed dullness to the left of the sternum.

3. Aneurysm of the Descending Aorta is fortunately of less frequent occurrence than either of the two other varieties. Its symptoms and objective findings are masked, and appear late in the disease. Pain is not constant, and when present, is atypical, being easily confused with various abdominal disorders. When stenosis of the esophagus or bronchus occurs, the diagnosis is more simple. The expansile throbbing pulsation in the left interscapular region is characteristic when present. The x-ray is invaluable in the detection of this type of aneurysm.

Coronary Occlusion. It is only recently that we have come to realize the frequency with which syphilis is the direct cause of coronary occlusion. It is unquestionably true that sclerosis of the coronaries as a part and parcel of a generalized arterial disease, provides the bulk of our anginas. And that another big group are due to stenosis of the coronaries by blockage of their ostia by atheromata. However in young adults who present no evidence of arterial change, syphilis is a frequent factor. The mechanism is typical and constant. It consists of a closure of the coronaries at their origin in the aorta through virtue of a mes-aortitis. The clinical differentiation between the specific and arteriosclerotic types is difficult and often impossible. It depends largely upon the evidence of the presence of specific disease on the one hand, and the absence of a generalized sclerosis on the other. The symptoms and findings of both are identical. A favorable response to specific treatment is often noted in both prologation of the interval between attacks, and amelioration of symptoms.

Symptoms of Coronary Occlusion. While the symptoms of coronary occlusion are many and varied, the more prominent and constant which merit special consideration, are:

A. Premonitory: (Often antedating the initial attack several months):

1. A sense of fatigue and tiring on inconsequential effort, and an associated aching of the skeletal muscles.

2. Indefinite cerebral manifestations, more especially dizziness associated with a wave of nausea, a buzzing or roaring in the ears.

3. Anorexia, nausea and belching.

4. A sense of constriction in the chest on exercise combined with tachycardia, palpitation and

more typically a conscious "missing" or dropping of a heart beat.

B. The Attack: 1. Pain present always, present early and remains the most characteristic phase of the picture. It is abrupt in onset, at first merely a dull heaviness on exertion, later severe and agonizing; limited at the start to the precordium, later classically radiates to the left shoulder, arm, forearm, wrist and hand. It is of brief duration, rarely lasting more than a few minutes.

2. A sense of constriction or tightness which comes on simultaneously with the pain, but is usually more transitory. It varies in intensity from a mere sense of discomfort to one of extreme dyspnea.

3. Mental anxiety, ranging from an indefinable apprehension to a state of wild terror. A primary attack is almost always associated with the fear of impending death.

4. Effort syndrome: True angina due to blockage of the coronaries is invariably precipitated by physical effort, occasionally but less frequently by mental excitement. Rarely is an attack ushered in when the patient is at rest. The exception to this rule is typified by that quite appreciable group which definitely owes its origin to a gastrointestinal upset. Such attacks are usually nocturnal or early in the morning, from six to eight hours after a heavy meal rich in carbohydrates and starches. The patient awakens from a restless sleep with a sense of constriction, even suffocation, precordial pain, and evidence of myocardial insufficiency. There is nausea, belching, but rarely vomiting, but the passing of enormous quantities of flatus. Polyuria is an almost constant symptom in this type of attack, the volume sometimes aggregating a half gallon. Mental anxiety is unusually pronounced, aggravated possibly by the darkness, silence and solitude of night. If the attack terminates favorably, the patient drops off into a sound sleep of exhaustion.

Physical signs are few, variable, and entirely unreliable. The pulse is not characteristic, but is usually small and of poor volume. The heart sounds are faint, often inaudible even to the stethoscope. The blood pressure in the absence of associated sclerosis furnishes no information. Between attacks, the electrocardiograph is of value, especially in the presence of myocardial



change. A negative T wave, and a widened and split initial deflection are suggestive.

**Aortic Insufficiency.** The aortic valves are involved in approximately fifty per cent. of all cases of specific aortitis. The valves are thickened, stiff and shortened, or they are pouch-like and adherent to the aortic wall. Relative insufficiency is frequently encountered due to a general widening of the aortic lumen in the region of the valvular ring. It hardly seems necessary to go into a discussion of the clinical side of aortic insufficiency due to syphilis. The picture is so frequently encountered, that there can be no confusion. However, a few observations may not be amiss:

1. It is well to remember that syphilis *per se* never causes a stenosis, or narrowing anywhere in the body. Its pathology tends towards the antithesis—a widening or thinning. Consequently in the presence of a double aortic lesion, both stenosis and insufficiency, we are not dealing with an uncomplicated specific lesion.

2. Syphilis rarely causes the extreme destruction of the valves so frequently encountered in non-specific endocarditis. This fact is of helpful clinical significance. A loud blowing diastolic murmur which completely replaces the second sound, is rarely of luetic origin.

3. Whereas a mitral heart decompensates frequently, remain decompensated over a protracted period, and then under careful management resumes its function, the reverse holds true in aortic insufficiency. Specific aortic insufficiency as a rule is associated with a prolonged compensatory period, and a brief and unfavorable decompensatory stage.

4. The earliest, most constant and most characteristic subjective symptom of a right heart lesion, is probably edema, and anasarca, which is replaced by dyspnea in aortic insufficiency.

5. Finally, an unfavorable and in many instances utter lack of response to digitalis is noted in aortic lesions of specific origin.

122 S. Michigan Avenue.

**NOTE.** For the pathology and pathological statistics embodied in this paper, I am indebted to Dr. Wm. Hueper, Assistant Professor of Pathology, Loyola U. School of Medicine, and Director of Laboratories at Mercy Hospital, Chicago.

## DISCUSSION

Dr. Charles L. Mix, Chicago. Owing to the lateness of the hour I shall not say very much except to call attention to the fact that everything that is in the paper is absolutely true.

One of the practical points is that there is no such thing as an aortic stenosis on the basis of syphilis, because syphilis is a great dilator. It is a producer of aneurysms, of aortic insufficiency.

There is perhaps another point that might be amplified a little. Dr. Berghoff stated that in aortic insufficiency the stage of compensation is long and the stage of decompensation short and fatal. It is because the stage of decompensation really marks the advent of another phase, namely, that of syphilitic myocarditis. I was taught that, if in aortic insufficiency edema developed, the patient would die. We were led to suppose that the edema was the result of the aortic insufficiency. As the speaker says, it is not. The dyspnea is. When a patient with aortic insufficiency develops myocarditis you cannot cure him. He is gone. No amount of therapeutics will ever revive him. Indeed, it may be true that one can precipitate the advent of a bad turn in some of the cases by too thorough a treatment. In a bad case of aortitis the giving of neo-salvarsan is bad therapeutics. It precipitates the fatal issue. To one patient whose disease began in September perhaps too much iodide of potash was given, with the result that an aneurysm was produced which was fatal in May. At least I think the aneurysm resulted from too rapid a stretching of an aortic arch. I do not know. One at least knows this, that following the giving of a good deal of iodine or neoarsphenamine one may produce absorption of the inflammatory tissue and so bring about a lessening of strength of the aortic wall and therefore a tendency towards greater dilatation.

When one sees a man in the fourth decade of life with an aortic systolic murmur and a little dullness in the second right interspace, one ought always to be extremely careful about the prognosis. One should be extremely careful about committing himself as to the presence or absence of aneurysm. It is a matter of taste whether one calls a small dilatation an aneurysm or a mere dilatation. There comes a time when the dilatations become so large that one may call them aneurysms. When that point is reached then there is apt to be a rapid finale, if the case is on a syphilitic basis.

Some aortitic cases if observed very early can be helped and apparently the lives of these patients saved. Early diagnosis is therefore highly essential. A pain associated with an aortic systolic murmur must never be turned down as something not worthy of very much consideration.

Dr. Robert Berghoff, Chicago (closing): I simply want to thank the officers of the Section for the privilege extended me. I want to thank everybody for staying here when the dinner hour has long passed. And I wish to express to Dr. Mix my appreciation of his kindness in discussing my paper.

## RADIUM AND X-RAY BOTH ESSENTIAL IN THERAPY\*

T. D. CANTRELL, M. D.

BLOOMINGTON, ILLINOIS

Irradiation, while relatively new as a therapeutic agent, and while we have been disappointed to a certain extent in the great hopes that we at first entertained for it as a cure of malignancy, yet has been proven to be of definite and great value when used properly. It has its limitations. The establishment of its limitations required as much research and is of as much importance as the discovery of its possibly good results.

When we consider the fact that for over two thousand years the medical profession has sought for a cure for disease and that even yet every disease has its mortality rate in spite of the great strides that we have made in the treatment of disease, we should not be discouraged in regard to irradiation. Irradiation has proven to be the best available treatment for malignancy and many other diseases. Probability of *cure* depends on early diagnosis and treatment, but even when all chance for cure has passed, irradiation can do much to mitigate the suffering of the patient's remaining days. Hence, the public must be taught to early give heed to ulcers, irritable warts, moles, etc. It is up to us to develop the technique and establish the limitations so that we will be able to render the best results and furnish the most benefits to our patients.

The particular question considered in this paper is what modalities may be used under certain conditions to produce these results. Although radium and x-ray have been in use for over a quarter of a century, there is still wide divergence of opinion as to their relative merits under certain conditions. Some prefer the radium, others the x-ray and some of us prefer to use both.

Not enough emphasis has been placed upon the inverse square law in irradiation, so I will limit my remarks to this one subject, hoping that much will be brought out in the discussion that will be of value.

Radium has the advantage of being easy to

learn to use and easy to apply, as it is always constant in its output. Only four variations have to be mastered: the amount of radium to be used, *amount* of filtration, *distance* from the part and *time*. Furthermore, it is easily transported, and can be taken to the bedside of the patient. Were we able in all cases to get as good results from radium as we do with the x-ray, we could dispense with the big unwieldy x-ray machine. No one would be better pleased than I were this the case.

But to my mind, radium, while absolutely essential in some cases, is quite limited in its scope. The generally accepted theory of the inverse square law is a bugaboo to the radium enthusiast. Arguments based upon this seemingly proved law in favor of x-ray are always answered by mention of the shorter wave length; hence greater penetration of radium. They seem to think that when radium is placed on one side of the body the other side has an affinity for drawing the rays clear through. But accurate scientific investigation has proved the radium rays to be amenable to the inverse square law the same as the x-ray.

Radium sends an equal radiation in all directions, like unto the sun. The bundle of rays *diverge* as they proceed from the central point. This divergence limits the amount of radiation possible to apply to any structure inversely to the square of the distance. Thus, if radium is placed one cm from the skin, its radiations at three cms deep (that being four cms from the radium), equals the sum of  $1 \times 1$  divided by  $4 \times 4$ , or one-sixteenth of the radiation on the skin, less the absorption by the tissues.

Some radiologists seem to think that because radium has a shorter wave length it has greater penetration, but increased penetration *cannot augment the amount of radiation available*. The amount available at any given distance can be accurately estimated by the inverse square law. There is evidently slightly less obstruction to the passage of radium radiation by the tissues than to the slightly longer wave length of the x-ray, but the difference is slight. In other words, one can never get more than one-sixteenth of the radiation given the skin at three cms depth with the radium placed at one cm from the skin, but the loss from that amount is less according to the shortness of the wave length. Hence, to

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undertake to treat lesions from three to ten cms in depth is fraught with failure because of two principles; the amount delivered is too limited and the area *too small to produce sufficient secondary radiation within the tissues*. Any radiologist knows that the smaller the area of surface exposed, the clearer the picture obtained, because of less secondary radiation. The Gamma Ray given off by both radium and x-ray is generally considered a non-therapeutic ray, and yet in deep therapy with heavy filtration it is about the only ray delivered to the tissue, and we must depend on the secondary rays produced in the tissues by the resistance to the passage of the ray for the therapeutic effect. This is why most x-ray men have discontinued the small port of entrance, but treat a larger port at one treatment.

This is impractical if not impossible with radium. One hundred mgs of radium with proper filtration ten cms from the skin would require over one hundred hours to produce an erythema dose, and yet, at a depth of ten cms the tissue would receive  $10 \times 10$  divided by  $20 \times 20$ , or one-fourth of the skin dose, being limited in the tissue by a section of a circle with a twenty cm radius, only the central ray reaching the ten cm depth.

Radium is par excellence where it can be placed in proximity to the lesion, such as in the cavities of the body. The cervix uteri will stand thirty-six hundred mg hours provided the rectum and bladder are packed away so that they are protected according to the inverse square law. If they are kept four cms from the radium, they will receive  $1 \times 1$  divided by  $4 \times 4$ , or one-sixteenth as much as the uterine wall one cm from the radium. But what about the infected glands in the pelvis? The same law deprives them of the proper irradiation; hence, to render the best service, the treatment must be augmented by deep x-ray therapy.

X-ray therapy differs widely from radium because of the greater skin distance. At the usual distance, fifty cms, the amount delivered to the tissue ten cms below the skin will equal  $50 \times 50$  divided by  $60 \times 60$ , or about two-thirds of the skin dose less the absorption. By actual measurement from 40 to 43 per cent. of the skin dose is delivered to the tissues ten cms deep. If to this is added the effect of the increased secondary radiation due to the larger area treated, we have an

effect at ten cms deep at least equal to fifty per cent. of the skin dose. This dose with proper filtration can be administered in about one hour. By using the anterior and posterior body surfaces, one has a fairly equal dose through twenty cms of tissue. The uterus is so tolerant of the ray that a full dose of x-ray can be given soon after the completion of radium treatment. I find that after a brief period of four to six weeks following a full dose of radiation that I can treat the patient with one-fifth of the erythema dose every two weeks indefinitely, and even in incurable cases can add much to the patient's comfort and prolong life.

I recently saw a patient where some one had attempted to treat the glands of the neck with radium. The entire skin of the neck was a dark cherry red color, scaling; an irreparable injury done the skin, but not total destruction. The same irradiation could have been given the glands of that neck with x-ray without even reaching a slight erythema dose to the skin or removing the beard. Lesions in the mouth, throat and esophagus should be treated with radium, but x-ray is the choice in treating the adjacent glands. The administration of x-ray is much more complicated and requires the services of one with technical knowledge and sufficient mechanical skill to keep the machinery working to full efficiency. Especially in the country, it is necessary for the radiologist to know his machines thoroughly. A perfect working and efficient machine is a necessity where deep diffused irradiation is required. The very life of the patient may depend upon it.

The incurable cancer patients are always a problem. Radiation will do more for them than everything else combined, but too often they demand more than can be given. Divided doses given every week or two usually relieves the pain, prevent ulceration with the foul odor, keep the patient in good spirits, a fit indweller of the home until the time that some metastasis kindly removes them. Yes, if x-ray never cured a case of cancer, it is invaluable as a treatment for cancers.

I am not a prophet, nor a son of a prophet, but I will dare to say that I believe that if we continue to care for and cure the local superficial lesions before they reach the stage of metastasis, especially those of the uterus and breasts, that

cancer will soon be under relative control. The surgeons now admit that many suspicious lesions should be removed on suspicion. We will have to take the same attitude in regard to irradiation if we expect to make *cures* rather than benefits. As syphilis is often the result of unobserved and unrecognized primary lesion, so is internal cancer often the result of neglect of irritable warts, moles and other superficial lesions.

In conclusion, it seems to me that radium is the treatment par excellence where it can be placed in proximity to the lesion and where we would have to go through tissue to reach the lesion with x-ray, such as for cancer located in the cavities of the body. Skin lesions can be treated equally well with either modality. The x-ray is to be preferred where a large area is to be treated and deep penetration desired.

#### DISCUSSION

Dr. Henry Schmitz, Chicago: I did not know the points Dr. Cantrell was going to bring out in the presentation of his paper why a combination of radium and x-ray is necessary in the treatment of carcinoma in any part of the body. However, he proved his points very well.

When we consider the dispersion of radiations due to distance we begin to realize that radium is the remedy par excellence when a local circumscribed effect is desired. Such conditions are the small lesion as skin cancers, cervical cancers and circumscribed small growths in other regions of the body. On the other hand, x-ray should be used when a lesion of very large extent must be treated as breast cancers, abdominal cancers, disseminated cervical carcinomas and so forth.

Frequently a combination of radium and x-rays enables one to attain a relatively homogeneous distribution of rays which could not be attained otherwise. I refer especially to cancers of the pelvic organs and the mammary gland. The combined method of radium and x-ray treatment enables the radiologist to attack many growths which otherwise could not be treated. The apparent inhomogeneity of the distribution of radiations in a tumor may also be remedied by the use of radiation needles or radium seeds. Whether the needling or seeding methods will give better results the future will tell. They have not been successful in pelvic cancers in comparison to the older methods. Seeds and needles cause a destruction of tissue in its immediate surroundings due to the beta rays which are not screened.

The method of the combined application of radium and x-ray enables one to apply a summation of rays twice as large as the biologic dose, i. e. the unit or erythema skin dose, without the detrimental effects produced by a double dose of either agent used alone. The method also enables one to distribute the radiation dose homogeneously by using several ports of

entry and by varying the focus skin distance. I am convinced of the correctness of the last method.

Dr. Harold Swanberg, Quincy, Ill.: After all is said and done, we, of course, need both x-rays and radium in our therapy, and it is the business of the radiologist to know which to use, and when and how.

There are some general rules to guide us in the selection of each remedy. However, we are far from agreed on what the best remedy is, in all instances. There is one point, though, that I would like to emphasize, and that is the value of always remembering the inverse square law which Dr. Cantrell has explained in such an interesting way. Particularly in the treatment of carcinoma of the uterus, it seems, too many men, especially the general surgeons, rely too frequently on radium and don't supplement the treatment with the proper deep x-ray therapy. And then, in some of our larger clinics, there is a great tendency now-a-days, to rely on the use of the so-called radium packs, which require a large amount of radium. I don't know whether they have so much radium on hand, that they don't know what to do with it or not, and rather than leave it in the safe at night, put it on patients, to give radiation treatment. But at least, on theoretical grounds, it seems we can get a much better depth-dose by using deep x-ray therapy at fifty, sixty, or seventy centimeters away than by using the so-called radium packs that are used at six to ten centimeters distant. There is no question but that the depth-dose is very much greater with x-rays at five, six or eight times the distance, and of course, you know, the treatment can be completed in a much shorter period of time.

Dr. T. D. Cantrell, Bloomington, Ill.: No one knows better than I that this paper is elementary. I knew that when I read it. I have my object for it. I felt it was worth while to get this before the general practitioner. While elementary to us, it may not be to him, and I feel complimented on the way it has been received and discussed here.

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#### WORK THE SCIENTIFIC SERVICE COMMITTEE HAS TO OFFER THE COUNTY SECRETARY\*

W. S. BOUGHER, M. D.,  
Secretary Englewood Branch  
Chicago Medical Society

CHICAGO

Some of the matter contained in this paper has already been published in the ILLINOIS MEDICAL JOURNAL, but the scientific service committee are of the opinion that it will bear repeating at this time.

It is my purpose to give you these outlines, and

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those who discuss the paper will bring out more in detail the plans of the committee.

This committee was appointed at the September, 1926, meeting of the council. No plan of action or detailed directions for the work were given by the council, but a general survey of the State, made by the lay education committee during the previous two years, had shown that the county societies of the State might be roughly divided into three groups: First, those that were active, had regular meetings, secured such speakers as they wished from wherever they wished, and were generally about all that could be expected from a medical society.

Second, a group consisting of about thirty per cent. of the counties, met at irregular intervals and were less fortunate in securing speakers and in having discussed subjects which county societies should take an active interest in.

The third group, consisting of about thirty per cent. of the counties, were largely dormant, meeting infrequently or not at all. Many of them, because of their geographical location or the smallness of the society, feel hesitant about inviting speakers to appear before them. It was hoped the scientific service committee would be of greatest value to this latest group. It was not believed the committee would have much to offer the counties of the first group.

We undertook to compile a list of subjects that could be presented either by talks, dry clinics, or by a combination of the two. An invitation for suggestions along this line was broadcast over the state and a few replies came in. Then it was decided to organize this work into sections. For example, orthopedics, pediatrics, general medicine, general surgery, tuberculosis and obstetrics.

For the work in orthopedics, Drs. Phillip H. Kreuscher and Philip Lewin of Chicago, and Sidney Easton of Peoria, met with the chairman, Dr. Hutton, Dr. Mundt and Miss Keller. They compiled a list of fourteen subjects. They also arranged to outline each one of these subjects so that a man interested in orthopedics but not confining his work entirely to it, can take this outline and get up a very good talk on any of these subjects and be reasonably sure that he is on safe ground. It was hoped, in this way, to interest men over the state so that if a call came in from some place in the far end of the state

it would not be necessary to send a man from Chicago or Peoria or Springfield, but that one closer at hand could fill the appointment with credit to himself and the society and with less expense to the society.

The work in surgery was arranged by Dr. Don Deal of Springfield, chairman, Dr. H. G. Moss of Carbondale and Dr. George Thompson of Chicago. The same plan as above was followed in this group.

For medicine, Drs. W. H. Holmes of Chicago, chairman, James G. Carr, A. A. Goldsmith, and Don Sutton of Chicago, and Andy Hall of Mount Vernon, arranged the work along the same lines as in orthopedics, surgery, etc.

For obstetrics, Drs. David S. Hillis, N. Sproat Heaney of Chicago, W. C. Danforth of Evanston, D. C. Smith of Rockford and F. L. Heinemeyer of Rockford, agreed to work out and compile an outline which can be given to the societies. They have in mind a manikin which can be carried and used at the meetings.

For the work in tuberculosis, Drs. Robert H. Hayes, Clarence Wheaton and W. H. Watterson of Chicago, met Dr. Roswell T. Pettit of Ottawa, and Dr. Robert Bosworth, of Rockford, for its organization, and speakers on this subject have been supplied by calling some of these men. They knew pretty well who was doing T. B. work over the State, and in only one instance have we had to send a man very far to fill an appointment for this work.

In pediatrics, Drs. Maurice L. Blatt, Julius Hess, Jesse Gerstley, Clifford Grullee, and Robert A. Black of Chicago, have this department in charge, and are now able to send some one to you when requested.

The work in skin and G. U., gynecology and neurology is yet to be organized.

Dr. Meyer Solomon has suggested a list of subjects in neuro-psychiatry and secured a number of men who were willing to present these subjects before county societies.

We have planned to interest as many men as possible in this work and to spread it out over the State so that most requests for speakers could be supplied without asking any one man to travel far or often. A number of county societies have been supplied with speakers, some of them two or three times.

Dr. Carl A. Hedblom, professor of surgery,

University of Illinois, is interested in this work and anxious to have that school co-operate with the committee. He has a speakers' bureau arranged from members of that faculty so that that group alone could supply a good many speakers on various phases of medicine and surgery.

Through Dr. W. H. Holmes we have been able to secure the co-operation of Northwestern University and that has been invaluable. As a matter of fact, the committee has had no difficulty in securing the co-operation of most men in this work.

Dr. Harold Swanberg, of Quincy, and Dr. E. S. Blaine of Chicago, have compiled a list of subjects in radiology that should prove interesting to county societies.

The scientific service committee of the Illinois State Medical Society is prepared to furnish speakers to component medical organizations for discussion of any of the subjects listed on the following pages. Requests for service should be made not less than three weeks preceding the date for which the speaker is desired to the chairman, Dr. James H. Hutton, or to the office of the Department of Education, Illinois State Medical Society, 185 N. Wabash Avenue, Chicago.

Following is a list of subjects to select from, most of which have already been published in the **ILLINOIS MEDICAL JOURNAL**:

#### INTERNAL MEDICINE

- 1—Peptic Ulcer.  
Gastric—duodenal.  
Diagnosis—treatment.  
Medical—surgical.
- 2—Gall Tract Disease.  
Diagnosis—prognosis—medical treatment.
- 3—Diabetes.  
Diagnosis—management.
- 4—Respiratory Infections.  
Influenza.  
The pneumonias.  
Common colds.
- 5—Cardio-vascular disease.  
Diagnosis and treatment of early heart failure—of advanced heart failure.  
Nature and significance of cardiac murmurs—of cardiac pain—of cardiac irregularities.  
Prevention of cardiac disease.
- 6—Kidney Disease.  
Simplification of nomenclature and classification, clarifying nephritis and nephrosis.  
Diagnosis—treatment.
- 7—Goiter.  
Simple classification.  
Treatment of various types—medical, iodine, surgical.  
Diagnosis of various types.
- 8—Disease of the Colon.
- 9—Jaundice.
- 10—Headache.
- 11—Cyanosis.

- 12—Dyspnea.
- 13—Edema.
- 14—Constipation.
- 15—Diarrhea.
- 16—Cough.
- 17—Albuminuria.
- 18—Blood Disease.
- 19—Eruptive Fevers.
- 20—The Business Side of Medicine.
- 21—Preventive Medicine.  
(a) Community sanitation from the doctor's viewpoint.  
(b) The profitable practice of the periodical health examination.  
(c) Immunizations.
- 22—Empyema.  
Recognition—medical and surgical treatment.
- 23—The Endocrines in Everyday Practice.  
Endocrine factors in ordinary complaints such as common colds, "chronic rheumatism," "rheumatoid arthritis," backache, dysmenorrhea, headache, cardiac disturbances, obesity, nephritis, etc.  
Recognition and management.
- 24—Medical Aspects of the Menopause.
- 25—Focal Infections.  
Medical and dental aspects—relation to general medicine.
- 26—Arthritis, from a medical standpoint.  
Acute—treatment.  
Chronic—diagnosis and treatment.
- 27—Pyelitis or pyelonephritis.  
Symptoms—Diagnosis—Treatment.
- 28—Rational Physio-Therapy.

#### SURGICAL DEPARTMENT

- 1—Diseases of the gall bladder, including a discussion of their influence on other functions of the body and the present-day surgical treatment.
- 2—The diagnosis and treatment of acute appendicitis.
- 3—Efficient first aid treatment.
- 4—Surgery on the thyroid, including a discussion of the type of cases, preparation before operation and the best post-operative treatment.
- 5—Treatment of shock following an injury.
- 6—The acute abdomen; findings which may lead to a diagnosis.
- 7—Treatment of fractures.
- 8—Surgical management of chest diseases and injuries.  
Empyema—Abscess—Gangrene—Bronchiectasis—Rib fracture—Suppurative pericarditis—Gunshot and puncture wounds—Tuberculosis.
- 9—Head injuries.
- 10—The surgical stomach.
- 11—The modern treatment of cancer.
- 12—Surgery of the hand.
- 13—Indications for nose, throat and ear operations.
- 14—Relations of chronic abdominal infections to degenerative diseases.
- 15—Back pain.

#### OBSTETRICS

- A—Prenatal case.  
1st examination—General, Pelvic.  
Management of early pregnancy: Toxemias, Incidental diseases—tuberculosis, syphilis, heart, etc.—Malpositions.
- Management of late pregnancy: Toxemias, Diagnosis of pelvis, Prognosis of labor.
- B—Labor.  
Diagnosis: Position, Presentation, Station, and prognosis, Mechanism.  
Management. Cephalic presentation. Breech presentation. 1st, 2nd and 3rd stages.
- C—Abnormal Labor.  
Management 1st stage—deviations. Failure to dilate.  
Management 2nd stage—deviations. Abnormal mechanism.  
Management 3rd stage—deviations. Prevention of delay and hemorrhage.
- D—Hemorrhage. Diagnosis and management.  
In early pregnancy.  
In late pregnancy.



Post partum.

E—Eclampsia, heart disease.

F—Final examination.

#### ORTHOPEDICS

- 1—Fractures (special).
  - a. Malunited and ununited.
  - b. Near and into the joint.
  - c. Spinal column.
- 2—Internal derangement of the knee joint.
- 3—Injuries and inflammations in and around the shoulder joint.
- 4—Peripheral nerve injuries.
- 5—Backache.
  - a. Causes.
  - b. Treatment.
- 6—Arthritis.
  - a. Varieties (clinical).
  - b. Causes.
  - c. Management.
- 7—Congenital Deformities of the Bones and Joints.
- 8—Infantile Paralysis.
- 9—Tuberculosis of the Bones and Joints.
- 10—Bone and Joint Diseases of Infancy and Childhood.
  - a. Rickets.
  - b. Scurvy (et cetera).
  - c. Lues.
- 11—Bone and Joint Tumors.
 

(Primary and Metastatic.)
- 12—Foot Deformities.
 

(Etiology, Prevention and Treatment.)
- 13—Posture.
- 14—Scoliosis.
 

(Lateral curvature of the spine.)

#### PEDIATRICS

1. Principles and Technique of Infant Feeding.
2. Nose and Throat Infections in Children.
3. The essentials in the care and feeding of the new born.
4. Prevention and Treatment of Heart Disease.

### CLASSIFICATION OF THE NEPHRITIDES\*

WARREN PEARCE, M. D.  
QUINCY, ILL.

One may assume that diseases for which large numbers of remedies are suggested and used are very difficult to treat satisfactorily. An analogous situation is the classification of the nephritides. The large number of classifications that have been offered demonstrates to us the difficulties encountered in classifying these medical kidney diseases.

Since Bright's description in 1827 of the disease that bears his name, clinicians have attempted to classify the nephritides but none of the results have been entirely satisfactory. As Elwyn states, "An ideal classification would be one in which each form of nephritis should find its place as a distinct and separate entity with a definite etiology, pathology and clinical picture." Manifestly, this is not possible. The etiology in many cases is unknown and it is frequently

difficult to correlate the pathology and clinical picture. It is desirable, however, that there be a generally accepted arrangement of the nephritides because the treatment of the various types differs greatly. Also, if there were one generally recognized classification, the writers on this subject would be more clearly understood and much of the confusion, experienced by most of us, would be avoided. It must be borne in mind, however, that in any classification there will inevitably be a merging of the types—each one at times having some of the characteristics of another.

Any classification, therefore, must be considered not as an arbitrary division with hard and fast lines, but rather as a guide to assist in the study and treatment of the disease.

All of the earlier classifications were based upon the pathological changes in the kidney and it has not been many years since the only classification taught was that of Virchow; namely, parenchymatous and interstitial nephritis. The term interstitial nephritis is not frequently used at this time because it is not descriptive of a type, and it is recognized that the interstitial tissue is not a primary condition but rather is secondary to other changes. Indeed, some writers consider all nephritis not as a kidney disease but as part of a general disease in which there is a kidney syndrome. Rockwood, Mussey and Keith of the Mayo clinic made a study of fifty-seven cases of nephritis in pregnancy, using the Volhard method of classification, and concluded that both nephritis and toxemia of pregnancy are general diseases affecting the cardio-renal-vascular system as a whole. They also showed that in the classes diagnosed as focal nephritis, benign hypertension and nephrosis, the patients, for the most part, recovered with but little residual disease—whereas, the groups called chronic glomerulo nephritis, malignant hypertension and chronic nephritis showed a high mortality, the group of chronic glomerulo nephritis particularly so.

Previous to the grouping by Virchow, Wilks had described the large white kidney and the small contracted kidney. Virchow in his classification was describing conditions with the same pathology.

It was in 1905 that an attempt was first made to separate the inflammatory lesions of the kid-

\*Read before the Section on Medicine, Illinois State Medical Society, Moline, Ill., May 31, 1927.

ney, or true nephritides, from the degenerative types of kidney involvement. Frederick Muller at this time, suggested the term nephrosis to describe certain degenerative kidney conditions and the addition of this term to the nomenclature has caused some confusion. Volhard and Fahr, a few years later, adopted the term for degenerative tubular conditions. Their description of the clinical picture was that of a disease characterized by chronic course, albuminuria, oliguria and edema, and in which there was no hypertension or renal insufficiency. Later Munk showed that cases of nephrosis having these symptoms were also characterized by the presence of double refractive lipoids in the urine and lipoids in the convoluted tubules. He classified these cases as lipid nephrosis and that term has been accepted by many writers on the subject. Other forms of nephrosis recognized are the kidney of pregnancy, the amyloid kidney and the nephrosis of mercurial poisoning. Fahr, a few years ago, after a review of the subject, came to the conclusion that the term should be used to include all forms of tubular degeneration, but recognized lipid nephrosis as a specific form, characterized by a definite clinical picture. Epstein uses the term chronic nephrosis to designate cases in which a profound metabolic disturbance exists and states that the tubular degeneration found in these cases is not a primary kidney condition, but rather a part of this marked metabolic disturbance. He applies the name diabetes albuminuricus to this condition, which in his opinion, is a disturbance of the protein metabolism and later of the lipoids, comparable to the disturbance of carbohydrate metabolism in diabetes mellitus. He has had considerable success in the treatment of this condition with thyroid substance. It is important that nephrosis be recognized in an arrangement of medical diseases of the kidneys, as the treatment differs greatly from true glomerulo nephritis. The fact that in lipid nephrosis the products of protein metabolism are not increased in the blood, lead Volhard and Fahr to recommend a diet containing liberal amount of protein. Epstein uses a high protein diet but one which is poor in carbohydrates and fats. Whether or not the beneficent results of the high protein diet in lipid nephrosis is due, as Elwyn believes, to the specific dynamic action of the protein, the

improved results on such a diet definitely distinguishes the lipid nephrosis from glomerulo nephritis.

Prof. Monro of Glasgow divides the nephritides into acute and chronic, the chronic being subdivided into (a) chronic parenchymatous, and (b) contracting kidney, which is further subdivided into primary and secondary or arterio-sclerotic. Prof. Shaw Dunn, of the same city, classifies nephritis as acute, subacute and chronic. The acute type is further subdivided into diffuse glomerulo-tubular, focal glomerulo and acute interstitial. The subacute is divided into type 1 nephrosis and type 2 lesions in the glomeruli that are the logical outcome of those of acute glomerulo nephritis. The chronic is further divided into (a) secondarily contracted kidney, (b) focal chronic nephritis or so-called primary chronic interstitial nephritis.

Addis has attempted to classify nephritis etiologically and distinguishes three classes: 1. Hemorrhagic Bright's disease in which the initial stage is a streptococcus infection, 2. Degenerative Bright's disease which is further subdivided into (a) cryptic, in which the cause is not known, and (b) poisons of known chemical nature, i. e., pregnancy toxemia, toxemia of generalized infection, toxemia of mixed infection, and 3. Arterio-sclerotic. He uses the urinary sediments as a means of distinguishing the classes.

Probably the two best known classifications of the nephritides are those of Dr. Henry A. Christian and Volhard and Fahr. Dr. Christian has presented a classification that is purely a clinical one and its simplicity recommends it. He classifies the disease as acute nephritis, subacute nephritis and chronic nephritis. The subacute is subdivided into (a) subacute nephritis with edema, (b) hemorrhagic nephritis. The chronic nephritis is subdivided into (a) chronic nephritis with edema (b) chronic nephritis without edema, and (c) vascular hypertension progressing into nephritis. It will be seen that edema as a symptom is prominently used by him in distinguishing the various types. Dr. Christian states that chronic nephritis with edema of renal origin is rare and that in sixteen hundred and fifty cases of chronic nephritis, he had only five in the group of chronic nephritis with edema. Warfield uses the Christian classification but divides the chronic nephritis into



(a) with edema (wet), (b) without edema and with vascular hypertension (dry) and (c) a combination of one and two. In Dr. Christian's classification the degenerative conditions or nephroses are not recognized as a class. If Epstein is correct in his interpretation of nephrosis, it does not properly belong in a classification of the nephritides. The term, however, is so generally used that it seems desirable to include it in a classification of the medical kidney diseases.

The classification of Volhard and Fahr with its three main divisions being degenerative diseases or nephroses, inflammatory diseases or nephritides and arterio-sclerotic or scleroses is very well known and very valuable, but in its entirety with numerous subdivisions of each main division forms a rather complicated classification.

This brief exposition is sufficient to disclose the widely varying viewpoints from which writers have attacked this problem. Some writers have attempted pathological classifications, others etiological, and others clinical. There is also apparent a difference in opinion as to what constitutes nephritis. There is a common ground, however, where we all may meet. It will readily be granted that diseases of the kidney may be classified as surgical and non-surgical or medical. Let us classify then the medical conditions of the kidney. It appears to the writer that the most useful classification of medical kidney diseases to bear in mind is one in which the three main divisions of the Volhard and Fahr classification is utilized; namely, nephroses, inflammatory diseases or pure nephritides and arterio-sclerotic diseases. In this connection it must be remembered that the nephritis resulting from arterio-sclerotic disease is only a part of a general disease.

Let us reserve for classification in the first group those cases in which there is marked edema, normal blood pressure, normal or sub-normal non-protein blood nitrogen and approximately normal kidney function. These are the cases in which we find large amounts of albumin in the urine and chloride retention and are the cases in which high protein salt free diet should be used. These are the nephroses and we may subdivide them if desired into the nephrosis of pregnancy, lipid nephrosis, amyloid nephrosis and mercurial nephrosis. In the second group let us place those cases with absent or moderate

edema, increased non-protein blood nitrogen, hematuria and elevated blood pressure. These are the cases of real nephritis, in which low protein diet is indicated. Let us place in the third division those cases in which hypertension is the prominent early symptom and is followed by evidence of kidney disease as disclosed by albuminuria with casts and a moderate increase in non-protein blood nitrogen. These are not cases of nephritis per se, but the kidney condition is a result of generalized hypertension and arterio-sclerosis.

The writer again wishes to emphasize the fact that any classification of this very important disease can only serve as a guide for study and treatment, and offers this paper as a plea for the general adoption of a uniform classification.

### RETROBULBAR NEURITIS\*

URGING COLLABORATIVE STUDIES AND WIDER  
CLINICAL APPLICATION OF PERIMETRIC  
MEASUREMENTS

JAMES P. FITZGERALD, M. D.

CHICAGO

Retrobulbar neuritis, toxic amblyopia, and axial neuritis find frequent use in recent medical literature as interchangeable terms to describe states of pathology in the ganglionic cells of the retina or in the optic nerve proper. Examination may reveal the objective evidence of an actual neuritis under ophthalmoscopic observance, but more commonly carries only such subjective signs as a transient lowering of visual acuity, irregular contraction of the visual fields, with enlargement of the blind spots in association with relative or absolute scotomata. The onset is sudden. The vision becomes rapidly impaired as poisons carried by the blood stream act selectively upon ganglionic cell or synaptic junction. The degenerative patches result from the impaired nutrition due to local interference with the blood supply in self-sustaining toxemias fed by unsuspected foci of infection. Eventually the shifting pathology may spread and give rise to partial or complete atrophy of the optic nerve.

Retrobulbar neuritis is located in the orbital division of the optic nerve. Thus upon ophthalmoscopic examination there is found in the pa-

\*Read before the 77th annual meeting of the Illinois State Medical Society, Moline, Illinois, June 1st, 1927.

pilla either no changes at all or conditions that are insignificant and not characteristic. There may be some distension in the retinal vessels. Signs of atrophy are frequent after the acute stage of inflammation has subsided,—a descending atrophy, for it is from the peripheral portion of the divided fibers that the atrophy is slowly transmitted to the papilla and becomes visible with the ophthalmoscope. The inconclusive character of early ophthalmoscopic changes in these cases places the burden of diagnosis upon such other findings as visual acuity, the presence of scotomata, and alterations in the blind spot and peripheral fields. The changing nature of the findings from examination to examination is important and in most cases the visual disturbance is confined to the central field, or that portion which is supplied by the papillo-macular bundle. A central scotoma due to optic nerve disease is distinguished from one resulting from central choroiditis or retinitis by the fact that it involves no apparent distortion in shape and size of objects in or about the scotoma, and first colors to disappear are red and green. In primary disease of the macula retinal metamorphopsia is usually present, and scotoma for blue develops in advance of that for red and green. It is characteristic of acute forms of retrobulbar neuritis for visual disturbance to develop suddenly in an eye which looks normal. The pupil may be slightly dilated. Complaint is usually made of headache or dull pain in the orbit which is made more severe if the patient moves his eye or pushes it back into the orbit. Prognosis is usually favorable. Early cases are amenable to treatment. Prolonged inflammations or neglect of care may increase the visual disturbance to absolute blindness, or a primary descending atrophy of the optic nerve, often confined to the papillo-macular bundle, may develop.

The eventual extent of the damage in retrobulbar neuritis hinges upon the virulence of the infective agent, the degree of sensitization of the affected individual to the invading organism, and the possibility of limiting the general systemic infection or removing the primary sources of infection. Anaphylaxis and constitutional predispositions are important. Treatment remains empirical when the cause is obscure. Early diagnosis is the essence of effective management. Laboratory method is indispensable. The presence of such obvious causes as tubercu-

losis, rheumatism, or syphilis does not preclude the necessity for comprehensive clinical investigation to search out remote and hidden abscesses in teeth, tonsils, sinuses, or abdomen. We have known tuberculosis of the lungs to go unsuspected in a patient undergoing prolonged and vigorous treatment for syphilis. A tuberculous individual with eye involvement may suffer for instance at the same time from chronic lead poisoning, and some say openly that the diabetic type of central scotoma appears only among diabetics who are confirmed tobacco users. Every patient with retrobulbar neuritis is a proper candidate for prolonged and thoroughgoing clinical investigation. The old blanket categories of tuberculous, rheumatic, and syphilitic causes no longer suffice.

Causes listed in the literature include rheumatism, gout, dysentery, tuberculosis, intestinal stasis, syphilis, sinusitis, septic tonsils, typhoid, and low grade inflammations of many types in prostate or other pelvic organs. Retrobulbar neuritis as an early manifestation of multiple sclerosis offers interesting confirmation of the possible infectious origin of this disease. Tobacco, alcohol, and lead poisoning are always to be considered in differential diagnosis, and the possibility of sinusitis and pituitary disease. Organisms ordinarily non-pathogenic, as *B. subtilis*, have been incriminated. The incidence rates of retrobulbar neuritis are in doubt. The ever-increasing list of toxemias which may induce the condition includes many that are self-limited as well as many that are hopelessly obscured by remote etiology. Still other cases whose close observation might clear up disputed pictures are overlooked in an acute general condition of systemic infection. Mention in the literature may be found that a probable 10 per cent. of diabetics develop at some stage of their malady a retrobulbar neuritis of much prognostic value, or that the symptom is diagnostic in around 12 per cent. of cases of disseminated sclerosis. The percentage incidence is probably less in paranasal cases, though the indefatigable research among rhinologists into this interesting subject is responsible for a great preponderance of titles in the sinusitis series in recent years. In Langenbeck's etiological study sinusitis accounts for 3.5 per cent. of cases and ranks fifth as a cause of retrobulbar neuritis.

It was the report to the Vienna Ophthalmo-



logical Association in 1919 of a pronounced increase of retrobulbar neuritis in Vienna and the observation that, despite extensive investigation etiologically, 19 per cent. of cases could not be explained that led Prof. F. v. Herrenschwand and others to suspect a specific exciting cause which, either through an affinity for the mucous membrane of the nasal surrounding areas, or through a special force of its powers, or by specific biological characters which enabled it quickly to dig deep into the area and cause retrobulbar neuritis without causing radical changes in the mucous membrane. Herzog discovered that cases of retrobulbar neuritis in which other etiology is excluded and in which inspection of the nose gives negative findings and which recover with eradication of the ethmoid cells, which also look normal macroscopically, almost regularly show microscopic change.

This observation, though not reflected in American literature on the subject, has influenced the voluminous German reports which followed the 1919 communication on retrobulbar neuritis before the ophthalmological society of Vienna. The 1926 brochure on the subject issued by Prof. J. Meller and Dr. Oskar Hirsch from the eye clinic of the University of Vienna cites cases from their own experience in confirmation of Dr. Herzog's observation and Dr. Hirsch presents an interesting series of anatomical color plates in proof of diagnosis. "The error of excluding nasal pathology in many cases can be avoided," state these authors, "when one supplements the macroscopic findings by microscopic findings. The material for same is obtained through the exploratory opening of the ethmoid bone, which in such cases may not only be allowed, but indicated."

The new opinions recently brought forth by Behr and not yet fully reported on the development of multiple sclerosis are pertinent in this connection. He states that the reason why the optic nerve is so readily attacked is that the nerve lies so close to the surface that infection can easily penetrate to it. He transferred ethmoid bone from patients with multiple sclerosis to rabbits and produced paresis and symptoms of paralysis as well as changes in the optic nerve which closely resemble the symptoms of retrobulbar neuritis.

Prof. F. v. Herrenschwand, who also inter-

ested himself in the attempt to reconcile the divergences of opinions regarding the significance of the diseases of the nose as the cause of retrobulbar neuritis, has quoted authorities who give rhinological causes as ranging from 0.006 to 100 per cent. There are ranged, on one side, those who believe that any infection of nose and surrounding area can produce inflammation of the optic nerve and, on the other, those who will not recognize that even severe pus infection in areas surrounding the eye can cause retrobulbar neuritis. This wide contradiction of opinions results from the failure of extensive pathological-anatomical and bacteriological investigations, he says, and the difficulties of diagnosis under unfavorable conditions. The sinusitis series offers interesting possibilities of spectacular results from treatment. Nevertheless they seem to be receiving undue clinical emphasis. A joint investigation on the relationships of visual disturbance to nasal sinusitis has just been the subject of an interim report to the Scotch Society of Otology and Laryngology and the Scottish Ophthalmological Club to the effect that the cases are not convincing and that further collective inquiry will have to be made to clear up the etiology of the sinusitis series. Too many are of uncertain origin, and too many nasal inflammations are prodromal stages of systemic infections for general statements to be acceptable in proof of the contentions made. Reports of cases are by no means conclusive enough to clear up controversial points.

It is the rare case of influenza, dysentery, abdominal sepsis and the like that develops retrobulbar neuritis. In certain stages of diabetes characteristic field contractions develop which have important prognostic value, yet for the most part these eye conditions remain clinically unrecognized. Insular syphilis has a central scotoma for colors in 50 per cent. of cases, and localized syphilis may exhibit a basal meningitis with bitemporal hemianopsia as almost the only symptom, yet retrobulbar neuritis of syphilitic origin is by no means comprehensively reported. When medical ophthalmology has cleared up the clinical obscurity that surrounds this subject the whole question of toxemia will be an open book. It was Ernest Clarke, head of the section on ophthalmology of the British Royal Medical Society who recently pronounced that it is on the

basis of such remote physiological effects of bacterial invasion as these characteristic eye reactions to toxemia that the different types of streptococci will finally become differentiated. The type of soil on which the organism falls does not tell the whole story.

Recent neurological reports on multiple sclerosis are of interest in this connection. Cottreel and Wilson declare that the neurotic symptoms exhibited in disseminated sclerosis all point to dynamic alterations of function that have a toxic or toxi-structural origin. Douglas MacAlpine, physician in charge of the department of nervous diseases at Middlesex Hospital, London, declares that disseminated sclerosis is of infective origin, possibly occupational in its nature, being confined largely to woodworkers and persons engaged in agricultural pursuits. The infective process even at early stages is more widespread than clinical signs may show, hence the diagnostic value of eye signs. It is to be remembered that these patients seek medical aid first on account of a unilateral diplopia, or with sudden diminution of vision, particularly in the central field. No septic focus can be discovered in these cases. If the nerve involvement is close to the nerve head the disc may show blurred edges or moderate swelling. Pallor of the temporal half of both discs is extremely common as a late sign. The early subjective findings clear up more or less completely within a few weeks, but the multiple sclerosis which develops months later can be predicted on the basis of eye findings alone. One has always to be alert for late nerve involvement in cases of retrobulbar neuritis with no demonstrable focus of infection. Obscure recurrent conditions will probably develop an ultimate sclerosis with permanent interruption of nerve conduction.

The eye is particularly vulnerable to infective agents present in the posterior ethmoidal or sphenoidal cells through the very thin barriers which separate these structures. There is also the possibility of communication of sepsis by way of the subarachnoid space. Selective action of the toxin for optic nerve substance is another possibility in the attempt to account for why the eye is picked out in this disease, though selective affinity is a much less likely explanation than is the close anatomical relationship between paranasal sinuses and the brain and spinal cord struc-

tures. We are dealing here with the eye as an intimate part of the nervous system rather than as an organ of vision. Some neurological authorities cite ocular symptoms in at least 50 per cent. of all cases of disseminated sclerosis.

With the seat of the pathology located in the nerve, chiasm, tract, or brain the ophthalmological picture may be negative until late in the disease, and even then only a very moderate pallor may be observed. Idiopathy or hysterical amblyopia used to be a favorite clinical category for these cases, but blanket classifications of all types tend to disappear with honest-to-goodness study of all cases. In order to clear up the diagnosis in multiple sclerosis Uhtoff's groups of perimetric findings are useful. These are: 1. Central scotoma; 2. central scotoma and peripheral contraction; 3. irregular peripheral contraction; 4. regular concentric contraction, as in hysteria; 5. ring scotoma; and 6. variable changes which come and go, especially the central scotoma, and followed eventually by peripherally contracted fields.

*Improvements in Examination Technic.* The many difficulties in the way of precise measurement of the damage sustained in case of retrobulbar neuritis and the importance of quick work in getting at the root of the matter have resulted in the development of a new precision method for the measurement of central scotomata. The outline of the peripheral fields for white and colors obtainable by means of examination with the Bjerrum screen, or with early types of perimeters and scotometers proved quite inadequate and it remained for Dr. Ralph I. Lloyd to develop in his stereocampimeter the stereolens system which permits binocular fixation and broadens the field to 10 degrees nasally, 40 degrees temporally, and 30 degrees on either side above and below the center of fixation. This system utilizes two punktal lenses corrected for astigmatism of oblique pencils for a total angle of 3 degrees, base cut, and adjusted with optical centers 80 mm. apart to coincide with the fixing centers of the chart. Each lens with prism attached rotates around its optical axis and is adjustable in lateral directions as well. My preference is to use 0.5 and 1 mm. color carriers, with only the smaller size of red and green objects for use within eight or nine degrees of the fixation point. The 1 mm. carrier for red is recommended for outlin-



ing the blind spot. A standard lamp approximating daylight is used for all tests.

The eyes are made emmetropic with correcting lenses before examination is made. The patient is fully instructed as to examination procedure and measurements are taken as quickly as possible in order to obviate fatigue. Difficult patients may require serial tests. The examiner may need to familiarize himself with the apparatus which is being used by making several tests of his own fields. Repeated experiment with normal cases breeds confidence on the part of the examiner and a perfect technic is worth the effort to acquire.

The eye findings *per se* do not indicate the directions of clinical investigation, but exhaustive history taking with physical and chemical search will usually disclose the latent sinus disease, abscessed teeth, infected tonsils, or low grade pelvic inflammatory sources which account for the self-sustaining inflammations of the eye structures. Syphilis is always to be thought of, and tuberculosis. The whole range of clinical investigative method is often taxed to the utmost to get at the root of these matters. MacAlpine has aptly observed that diagnosis would be simplified if we had a complement fixation test as specific as the Wassermann. However obscure the cause, we are under the clinical necessity of making early diagnosis. The tendency of these cases to clear up by no means characterizes all cases. The transient nature of the defect is corroborative. Apart from injury and certain vascular disorders of the cortex, few central defects occur, and they are usually fixed, not transitory. A diagnosis should always be held in abeyance until retrobulbar neuritis is ruled out. Pressure signs need to be distinguished from inflammatory extensions from endogenous and exogenous causes. Idiopathic explanations become more and more rare as investigative method is more thoroughly employed. We always have the suspicion that more study was needed on the so-called idiopathic case.

A useful classification of etiology ranges all causes into two major groups according to endogenous and exogenous origins. Endogenous cases include: 1. Focal infections, such as sinus disease, focal centers about the teeth, tonsils, prostate, intestinal intoxications, and the like; 2. chronic subacute infections, such as syphilis,

rheumatism, nephritis and uremia, gout, tuberculosis, and diabetes; 3. acute infectious diseases, such as influenza, scarlet fever, dysentery, smallpox, intestinal sepsis, and malaria; 4. multiple sclerosis; 5. pituitary diseases; 6. hereditary optic nerve atrophy; 7. hysteria.

Exogenous causes include all conditions due to 1. alcohol and tobacco; 2. methyl alcohol; 3. such arsenical preparations as liquor potassa arsenitis, salicylate of mercury, cacodylate of soda, salvarsan, and atoxyl arsetyl; 4. lead; 5. quinin; 6. nitrobenzol; 7. anilin and the arylarsenates; 8. optochin; 9. iodoform; 10. mercury; 11. thyroïdin; 12. malefern and santonin.

*Treatment Both Empirical and Specific.* Treatment is directed primarily against the lesion, systemic disorder or local condition which forms the basis of the neuritis. In eliminating the original foci of infection the release of massive doses of bacteria is to be guarded against. These individuals are highly sensitized to the infecting organism and require skill in handling. Sinusitis patients often respond spectacularly to simple drainage operation, but even in the presence of a purulent sinus disease the possibility of more than one operating cause is not to be ignored. Endogenous and exogenous causes may exist together. The administration of iodid of potassium aids in the absorption of inflammatory products. Regulation of diet and free diaphoresis are useful. The patients should imbibe water freely. Later on, strychnin is valuable, especially by hypodermic injection.

MacAlpine has recommended the precise treatment of neurosyphilis, but with smaller dosage, for early cases of disseminated sclerosis. Failing intravenous, intramuscular preparations of arsenic are recommended by him, with Fowler's solution by mouth as a variant. Protein therapy is promising in his experience. Injections of milk or of typhoid vaccine are used with a small dose of novarsenobillon on day following injection. "Pyrexial treatment is useless in well established cases," he states, "and exogenous sources of this systemic infection may well repay further study."

A certain degree of empiricism attaches to the clinical management of these cases. Suspected syphilis may be clinically established in advance

of laboratory reports and treatment can proceed while laboratory confirmation of diagnosis is being sought. Inactivity may be a serious error in these cases and all cases of retrobulbar neuritis should be admitted to the hospital for the collaborative investigation of specialists. With causes and cures and expectant treatment all open to controversial claims, retrobulbar neuritis offers one of the most promising fields for ophthalmological study. Consistent critical review of all cases by permanently established committees with periodical interim reports is desirable, and no field promises a more important contribution from medical ophthalmology than to clear up some of the obscurity that surrounds conditions of systemic toxemia.

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## DISCUSSION

Dr. T. J. Williams, Chicago: The essayist has thoroughly covered the relatively small amount of material known to date regarding this obscure but interesting pathological condition. However, I wish to emphasize his plea for more thorough examination rather than to attribute all these cases to tuberculosis, syphilis or rheumatism, which have too frequently been attributed as the causes where more careful examination would have produced more accurate etiological causes. However, it is realized that though we search to the best of our ability the true cause too often remains as mysterious after our search as before, and fortunately for the patient in many cases he regains his central vision while we continue our search for its cause. What we classify as retrobulbar neuritis has several distinct and general causes. These might be classified more comprehensively than I have found to be the case in the literature, if we consider them among one of the following three groups: those cases due; 1. to pressure anywhere along the optic nerve, such as might develop from contiguous inflammations, especially from sinusitis in the sphenoid and posterior ethmoidal cell regions. In the final analysis it would seem that the sphenoid and posterior ethmoidal cells are not so commonly the cause as we at one time believed. Or we might have tumors or hemorrhage occurring either in the orbit or within the nerve sheath itself, and as the orbital nerve is a rather long, loose nerve, it is quite possible that in looking in extreme directions, we might unconsciously have a hemorrhage in the nerve sheath or orbit as easily as a subconjunctival hemorrhage where the vessels are equally poorly protected under the loose conjunctiva. Optic foramen distortion or increased intracranial pressure may also be included in the first group.

2. In the next group we include the infections that are conveyed to the optic nerve pathway, possibly including even its centers, by the blood stream. This group includes septic teeth, appendix, prostate or any other source of focal infection, including all the sinuses. Suppuration from the antra, frontals and anterior ethmoidal sinuses would, of course, be as prone to produce the neuritis as the posterior group of sinuses above mentioned. Here we must include



drugs and other chemicals mentioned by the essayist, these being carried by the blood stream to this delicate papillo-macular bundle.

3. In the next group we have those cases where retrobulbar neuritis is only another symptom of a *general condition*, optic atrophy, disseminated sclerosis, or tabes. The extremely high state of development of this wonderful and peculiar bundle of nerve filaments undoubtedly expose it to early participation in these central nerve system diseases, as well as to the virulent organisms carried from distant parts by the arteries, described in the second group. The optic nerve has been computed to contain between a million and a million and a half nerve fibres and it is estimated that one-third of these fibres pass through the papillo-macular bundle to the square millimeter of retinal area usually occupied by the macula. Regardless of the accuracy of this statement, it compels us to wonder not that we infrequently do have retrobulbar neuritis, but that it is not more common than we are aware, because patients, and often physicians, and too frequently oculists, easily overlook the condition, unless it is binocular, and we know that one eye may become involved and partly if not wholly recover, while the other eye, still uninvolved, may carry on until the originally involved eye begins to recover, when it may then pass through the same condition, unnoticed by both doctor and patient. I would like to call attention to the possibility of something new in the line of treatment. In April of last year Mr. A. S. Percival introduced before the Ophthalmological Society of Great Britain a possible specific for certain types of retrobulbar neuritis, particularly for the tobacco amblyopia type. He stated he had found in the literature that the use of water-cress had proven an effective antidote to lethal doses of nicotine in experimental animals, guinea pigs, rabbits and dogs. Since that time he had been feeding water-cress to these cases and while the results are not yet definitely established, he believes this treatment of value. At any rate, since effective treatment is so meagre, it would seem that this should be given clinical opportunity to prove or disprove its value. For some reason we do not have as much tobacco amblyopia in this country as in Great Britain. This may be due to the fact that shag and brown twist, two forms of tobacco popular in Great Britain, are not commonly used here. I do not know in what alkaloidal or other chemical content American tobacco differs from the British. Pain, especially orbital headache, is sometimes given as an accompanying symptom of retrobulbar neuritis. Personally I should consider pain, especially on ocular movement, due more to the accompanying orbital extensions of nasal pathology than to retrobulbar neuritis, because it is difficult to understand why pain should be present in a condition ordinarily limited to the optic nerve which ordinarily does not convey pain sense. I wish to both thank and congratulate Dr. Fitzgerald for his comprehensive analysis of this subject.

Dr. Michael Goldenburg, Chicago: There is a little test that may be of value in these cases. Take a rather

thin glass rod, and on the outside of the eyeball push it back and forth over the different muscles, and you may elicit pain over definite muscles which is absent over other muscles. These findings frequently tally with the pain the patient gets on rotation. These cases are probably secondary to an active condition like sinusitis. Since prohibition I have only seen one typical case of what we are accustomed to call toxic amblyopia. Today they are all extreme cases of neuritis.

## DIAGNOSIS AND TREATMENT OF GOITER\*

WM. J. CARTER, M. D.,  
MATTOON, ILL.

In selecting this subject to present to this Society, I do not presume to offer anything new in the diagnosis and treatment of a disease that has attracted the attention of so many of the students in our profession for years.

Graves in 1835, and Basedow in 1843, gave a complete description of this condition and since that time a vast amount of work has been done on the etiology, the pathology and the treatment of this disease; therefore, the most I can hope to do is to present the subject in such a way as to stimulate your interest in a disease that is so prevalent in the greater part of our state.

There is no other gland or organ that produces more and varied symptoms than those produced by the thyroid gland. It seems to be to the human mechanism what Mussolini is to Italy today, namely, the dictator to the various organs and glands of internal secretion that control our physical destinies.

Regardless of all modern investigations and research, the etiology of endemic goiter still remains one of the most obscure medical problems; and in the endemic goiter districts, we also find endemic cretinism, endemic deaf and dumb and endemic feeble-mindedness.

While we do not meet with goiter frequently enough in this district to be classed as endemic, I believe it is much more prevalent than is generally recognized. The symptoms of this, the king of the glands of internal secretion, may be present in all branches of medicine.

Within the last year I was asked to talk on goiter before a county medical society and the doctor who opened the discussion did so with

\*Read before the Section on Surgery, Illinois State Medical Society, Moline, May 31, 1927.

the statement: "While goiter is an interesting subject, we are not in a goiter district and therefore, it is not of practical importance to us." There were not more than twenty doctors present and it developed two of the twenty had goiter; one, a toxic substernal, the other exophthalmic.

There has been a great deal of publicity given this disease the last few years by the lay press which has stimulated a great interest among the readers, and is good for the cause in most instances. But there has been some harm come from it, either by the ill-advised publisher or by misinterpretation. At least, there seems to be a widespread tendency for all people, old and young alike, to take some form of iodine for the cure as well as the prevention of goiter.

Food companies have been very quick to take advantage of this opportunity to put on the market preparations containing iodine. I have had two patients consult me in the last year with unmistakable thyrotoxic symptoms, each with a small thyroid that promptly cleared up in a few weeks with no treatment or change other than discontinuance of the iodized salt used for seasoning their food.

Iodin given during too long a period of time, or in too large doses, not only produces the classical symptoms of intolerance, such as salivation, watering of the eyes, and congestion of the nasopharyngeal mucous membrane, but may also give rise to the worst thyrotoxic symptoms so similar to those seen in Basedow's disease that they have been called by Breur, "Iodin-Basedow." Every surgeon who has had some experience in goiter surgery has seen, I am sure, more than once, these artificially produced cases of Graves' disease caused simply by an untimely, exaggerated, and unintelligent treatment with iodine or its compounds. It should be borne in mind that iodine treatment for goiter does not need to be prolonged over a very long period of time, nor does it need to be intense, in order to be successful. When iodine is going to be active, it shows its efficacy very soon, say, after a period of two or three weeks. Consequently, if after a treatment of two or three months with small doses of the medicament, no, or very little improvement has been obtained, the medical treatment should be stopped. When successful, the treatment for safety's sake ought to be interrupted for small periods of rest of a few weeks in order to avoid symptoms of intoxication. We must not forget that there are patients who react so intensely to small amounts of iodine that not only do the worst symptoms of intoxication follow, but the goiter itself, instead of getting smaller, increases in size. There

are people, too, who are so extremely sensitive to iodine that a simple sojourn at the seashore, or the use of certain mineral waters, is sufficient to cause in them marked thyrotoxic symptoms. It should be always remembered that there are goiters which are *latent Basedow goiters*, in which iodine medication is apt to start the "unhinging of the thyroid mechanism," whose consequences no one can foresee.

There is, too, a class of patients to whom the iodine treatment must be administered with great care and under the constant supervision of a physician. They are patients whose goiters are complicated with thyrotoxicosis, with a chronically inflamed respiratory apparatus, or goiters which are manifestly functionally insufficient. Medical treatment must be, too, carefully watched in patients with obesity, myocarditis, diabetes, and nephritis.<sup>1</sup>

In some localities where goiter is prevalent, there have been various plans of supplying iodine to all school children. This would seem to be the most satisfactory method of treating potential goiter patients. This is not entirely free from danger, as there is an increasing number of thyrotoxic goiters reported in children of school age.

Hyperthyroidism in children is perhaps more common than has been supposed, and reported cases will undoubtedly appear more frequently in the future.

The etiology is unknown. A small percentage of the cases reported in the literature and in our own series, followed acute infections but ordinarily there is no tangible factor to which the disease can be attributed. The onset is abrupt and the clinical course rapid. Induced hyperthyroidism may follow the prophylactic use of iodine in a very small percentage of cases but this can usually be controlled by the discontinuance of the iodine.<sup>2</sup>

A satisfactory clinical classification of goiter that will harmonize with the pathological findings, is not easy to make, because most goiters are a mixed type involving two or three of the most usual forms; however, one type usually predominates and should be given special consideration. Clinically the symptoms may change very quickly from one class to another. We have all seen a non-toxic goiter suddenly take on toxic symptoms. This occurs so frequently some authorities give this group the name of secondary thyrotoxic goiter.

Colloid goiter is not usually considered a surgical disease except where causing pressure symptoms or of a size to cause its owner to seek relief because of its appearance.

The adenoma is an entirely different problem. At any time of life the adenoma is a potential



source of trouble to its owner. About 60 per cent. of adenomas become toxic some time during middle life. This is a surgical condition with no compromise, as none of the less radical methods of treatment are effective. The adenomas show a higher surgical mortality than any other class of goiter. After myocarditis has developed, there is little chance for the heart to return to normal after the removal of the thyroid.

The symptom complex known as Graves' disease, Basedow's disease, exophthalmic goiter, thyrotoxicosis and hyperthyroidism, used in the literature indiscriminately, has been confusing.

The cardinal symptoms of the disease are *cardiovascular, thyroid hypertrophy, exophthalmos and tremor*.

They may or may not all be present at the same time; one or more may stand out more prominently than the others, or may be entirely absent.

*Cardiovascular Symptoms.* Among the earliest symptoms of Graves' disease are palpitation of the heart, tachycardia and dyspnea; in fact, there is no Graves' disease without cardiovascular symptoms or thyrotoxic goiter heart. The most constant cardiovascular symptom is tachycardia. The pulse is rapid and continues rapid, even during sleep. It varies at times, but the remissions are not so marked as in other forms of rapid heart, while under little strain, such as changing position in bed, excitement, and at times from no apparent reason, the heart beats may vary between wide limits.

In goiter patients whose pulse rate is increased 40 per minute above his normal rate would mean 57,600 extra contractions every 24 hours.

Since this persistently high rapid heart of the toxic goiter patient may, and usually does, extend over a long period, it is little wonder the heart symptoms are the most important.

I recall having seen one goiter patient in which the patient's body and also the bed on which she was lying, vibrated with each heart beat.

"The Basedow patient suffers and dies because of his heart."

*Thyroid Hypertrophy.* "No goiter, no Basedow's disease," Kocher.

Thyroid enlargement may undergo great fluctuations. The size of the gland may not be in proportion to toxic symptoms present; in fact,

some very toxic patients have but slight enlargement of the thyroid.

Primary toxic goiter is one that develops toxic symptoms that has previously had no thyroid enlargement.

*Secondary toxic goiter* is one which develops toxic symptoms that has previously had a harmless goiter. The secondary group responds to surgical treatment far more readily than the primary.

Exophthalmos, although present in most cases, is absent at times or so slight that it may be overlooked. It is best seen in profile. After all other toxic symptoms show improvement, the exophthalmos may remain unchanged.

Unilateral exophthalmos is rather rare. However, I have had one such case. Lachrymal secretion is frequently exaggerated. Staring look is a symptom of Graves' disease that is very noticeable.

Muscular symptoms: tremor, muscular fatigue, sudden giving away of knees.

Nervous and mental symptoms: instability, irritability, restlessness, emotion.

Digestive disturbances; loss of appetite usually. Some have a ravenous appetite.

Nausea.

Gastric flatulence.

Vomiting. This is always a serious symptom and may be so serious as to endanger life. Diarrhea also is a serious symptom and often appears coincident with vomiting, in which case it is a most serious complication.

Menstrual disturbances are the rule in Graves' disease; usually scanty and may stop entirely at times; a premature menopause may remain permanent.

In the male the testicles may undergo atrophy.

Respiratory disturbances.

Shortness of breath.

Coughing.

Hoarseness.

*Sensory Disturbances:* Pains, headaches, vertigo, numbness and tingling.

*Cutaneous Symptoms:* Sensation of heat.

Dermographism.

Hyperhydrosis.

Itching of skin.

Urticaria.

Fall of hair.

Bronzing of skin.

## TREATMENT.

Almost all known therapeutic agents have been tried in the treatment of this disease, but there is no specific medical treatment.

Many agents have their place in the treatment of these cases. Lugol's solution, used properly, has a beneficial effect on these cases for a short time in tiding them over a crisis and preparing them for surgery.

X-ray treatments, properly given, will have a beneficial effect, but it has not been accepted as of lasting benefit by men of larger experiences.

Ligation of two or more of the thyroid arteries, like Lugol's solution, and x-ray, has a beneficial effect in preparation for thyroidectomy.

I have seen some very marked improvement from x-ray treatment in exophthalmic goiter as well as from ligation of thyroid arteries.

I have also seen some failures. On two occasions, after patients had been x-rayed with no beneficial results, I ligated both superior thyroid arteries and both patients died. Needless to say, I will never again ligate a case that has not shown any improvement from x-ray.

The stage operation, as advocated by Crile, makes surgery much more safe for the bad risks.

**Conclusion.** Don't use iodine indiscriminately in treatment of goiter.

Therefore, the most I can hope to do is to call your attention to the urgent need of a concerted effort on the part of the members of the profession that are especially interested and prepared, to stimulate the interest of the whole medical profession, as well as the laity in this a most vital subject to all.

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## THE PREVENTION OF INFANTILE SYPHILIS\*

HAROLD A. ROSENBAUM, M. D.

CHICAGO

With adequate treatment the prevention of syphilis in the fetus of the syphilitic mother is not difficult to accomplish. On the other hand,

the treatment of syphilis is a very painful and prolonged ordeal for a child to undergo. Because of the nature of antisyphilitic medication and the administration by injection there is always more or less hazard attending the treatment. The economic side, too, is important when one considers the cost of medical care and materials and that an adult must bring the child each time for treatment.

Another phase of importance is the mental side. When the child is old enough to realize that the whole thing is a secret and he feels that the disease is a disgrace, he has a don't care appearance, may be manifestly discouraged, or develop an inferiority complex. I think, however, in children old enough to understand there is unavoidable painful reflection about the disease. One of our patients, a fine little girl of twelve, comes from one of the suburbs for treatment because the mother fears that in some way the secret might leak out. This child takes her treatment like a little stoic but on a few occasions she has cried over her condition and there is unmistakably what one author has referred to as a syphilitic scar of the spirit. Two of the other girls, sisters, who live in an inferior environment, I feel certain, have thought too much about the venereal association of their disease.

One must remember that cure is not possible in all cases. Cases first coming under treatment when the child is several months old, or those with central nervous system involvement may not be cured and often there are remaining permanent stigmata of general constitutional inferiority.

The importance of the problem is brought into bold relief by the figures of J. W. Williams<sup>1</sup>. In a series of 10,000 obstetrical cases he found syphilis was the most important cause of fetal and infant mortality; 26% of the deaths from the seventh month to the end of the second week following delivery were due to this disease.

The number of cases in which we have personally been able to witness the effect of antisyphilitic treatment is small. It illustrates again, however, the value of treatment in protecting the offspring of syphilis. In nine syphilitic mothers whose children were syphilitic under treatment at our clinic, we were able to see that treatment was instituted in subsequent pregnancies. Each

\*From the Syphilis Clinic of the Children's Memorial Hospital, Chicago, Ill.



of the children of these pregnancies is clinically and serologically negative.

One of the families, consisting of seven children, presents an interesting record. During the mother's first pregnancy in 1912 she was given antisyphilitic treatment in the form of tablets by mouth throughout pregnancy. The child of this pregnancy has never had a sign or symptom of syphilis, including a negative Wassermann. After the birth of the first child the mother changed physicians and did not mention having been treated during her first pregnancy. She had been told that she was being treated for blood disease and did not know the real nature of her malady. Therefore, she did not attach much importance to the treatment and did not feel impelled to mention it. Following this normal first baby she gave birth to five syphilitic children. Subsequent to this she came under our care. Her Wassermann at this time was reported three plus. She was induced to take treatment which was continued about two years and up to one month of the time of delivery of her seventh baby. This seventh is now twenty months old and has always been normal physically and negative serologically.

In addition to these nine cases there were three cases which came to us previously treated after having borne syphilitic children. The children born following these three cases were normal. In two families in which we were treating syphilitic children the fathers refused to permit the mothers to be treated in subsequent pregnancies. The children in these cases were born syphilitic. One of the children was not treated and died at five months.

The most pathetic cases are those that faithfully seek prenatal care and are incompletely cared for. That is, the obstetrician is so intent upon his purely obstetric problem that he does not give the patient thorough medical consideration. In his prenatal care the obstetrician should include anything suggestive of syphilis in the history and physical examination and there should be a routine blood Wassermann test. Within the past year in his private practice the writer has had two cases that went regularly for prenatal care and bore syphilitic babies. Neither had had a Wassermann test and yet one of the mothers gave a history of a previous unex-

plained four months' miscarriage. When the obstetrician in the other of these cases was told that the baby was syphilitic and that the mother's Wassermann was four plus he was incredulous until he received a report of four plus on the mother's blood which he had sent to two laboratories. This case is merely cited to emphasize again that syphilis is often present where not at all suspected.

Probably the reason why there is so little difficulty in the prevention of syphilis in the fetus is because of the very rich vascularity of the fetal and maternal deciduae. Anti-syphilitic medication present in the maternal blood keeps the placenta normal and thus spirochetes do not invade the fetal tissue. As expressed by Findlay<sup>2</sup>: "It would seem that as long as the disease in this region (the placenta) is eradicated no harm can come to the fetus."

The simplicity of protecting the fetus against syphilis in the syphilitic mother is demonstrated by Hendry,<sup>3</sup> an obstetrician of Liverpool. This clinical report was made in 1920 and he states that his clinic was not adapted to the use of arsenobenzol derivatives since it was held in the premises loaned for the few hours necessary and no provision could be made for cases requiring to be kept under observation for some hours in the event of mishap. Mercury was therefore used in the form of gray oil injections and after two years because of the patient's complaints, gray powder, one gr. thrice daily was given by mouth instead of the oil injections. There were ninety-four cases reported of which forty-three were untreated. Of these forty-three cases there were fifteen abortions, fourteen still births, five neo-natal, twenty-nine living infants. Eleven cases were treated throughout pregnancy with no abortions, no still births, no neo-natal deaths. Hendry does not report any follow-up on these patients.

While this treatment should not be considered adequate and might confer little protection on subsequent pregnancies it does show the efficacy of even this type of treatment in protecting the offspring.

Williams<sup>4</sup> in 1920 published his results relative to treatment in 449 cases with positive Wassermann reactions. This number was secured from a series of 4,547 obstetrical cases. Of this 449 cases, 169 cases received no treatment and

48.5% of the babies were still born or showed signs of syphilis; 102 cases received two or three injections of Salvarsan; 39.2% of these babies were born dead or showed signs of syphilis. The remaining number, 176 cases, were given four to six injections of Salvarsan followed by mercury resulting in a negative Wassermann. Of these babies 6.7% were born dead or showed signs of syphilis. Notwithstanding the negative Wassermann reaction it is possible that some of the last group were not adequately treated inasmuch as most of the group had not been observed over a very long period of time.

Williams<sup>5</sup> in a later paper, published in 1922, analyzes a group of cases treated and observed over a longer period and in greater detail. The number of fetal and neo-natal deaths was less than that seen in non-syphilitic cases. One of the cases was of especial interest in relation to the Wassermann reaction. The patient was given thirty doses of diarsenal but the Wassermann was persistently positive. The baby was born without a sign of syphilis and was negative serologically. When examined nine months after delivery the child presented a negative Wassermann and was without any signs of syphilis.

Lucas<sup>6</sup> says that "the signs of syphilis have not been seen in the nursery of the University of California Hospital for a period of five years among the babies of our treated cases." These results are no doubt excellent, however, excepting the more virulent type most infantile syphilis appears beyond the second week of life.

This article is written to again call attention to the ease with which syphilis can be prevented in the offspring of syphilitic mothers and on the other hand to again picture the undesirable and pathetic associations and the difficulty of eradicating congenital syphilis when it exists. The

responsibility of prevention lies with the obstetrician and it would seem that a routine Wassermann is a part of complete prenatal care. By this universal complete prenatal care and treatment when needed, congenital syphilis should be a disease of the past.

4554 Broadway.

#### PULMONARY BLEEDING\*

HERMAN HARRISON COLE, M. D.

SPRINGFIELD, ILL.

An experience of something over ten years with all types of pulmonary bleeding, extending from hemoptysis incident to war wounds of the chest, to hemorrhages associated with advanced fibroid tuberculosis seen in sanatoria and private practice in civil life, has but served to convince me thoroughly that something is wrong with the methods we physicians have been taught by our medical schools and text-books for the control of these conditions. It is for the purpose of again emphasizing and describing the modern methods at our command that I come before you at this time.

The use of artificial pneumothorax for this purpose is not new in this country or abroad. It has been used extensively throughout the world and with increasing success over the latter half of the entire last century and is apparently stronger at the present than it has ever been. As we now understand pulmonary hemorrhage and the means at our command for its control, this comparatively minor operation offers the only solid ground upon which a physician confronted with a serious medical problem can safely and with confidence plant his feet. Hemorrhage in general is a serious mechanical complication, which must not be allowed to continue indefinitely. Control may take two general courses: treatment by increasing the coagulation of the blood, or in other words general measures, or local treatment aimed at the actual seat of the trouble. We use many general measures in connection with local, but never to their exclusion. In general internal hemorrhage where accessible we operate and ligate or apply local pressure as soon as general conditions warrant. Why then should we continue to treat hemorrhage from the lung on any other basis than this? Mechanical relief should be our first consideration and it is

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\*Read before the Section on Medicine, Illinois State Medical Society, Moline, May 31, 1927.



my purpose to show that the means are at hand for following out this principle.

The most frequent cause of pulmonary bleeding as we see it, is fibroid tuberculosis of the lungs. Over ninety per cent. of all blood spitting that we have seen at Springfield has been due primarily to this cause. Other occasional causes have been bullet and stab wounds of the chest, bronchiectasis, lung abscess, empyema and direct trauma of the chest wall. Twice I have seen bleeding from bronchial spirochetosis, and twice I have seen hemorrhage from contained foreign body in the lung, one a bullet, and one a shell fragment in discharged soldiers. Malignant disease of the lung may occasionally be at fault, and rarely cardiac disease. For the purpose of this paper I am including only those hemorrhages due to pulmonary tuberculosis, as to wander further afield would extend the scope of this paper far beyond my intention.

Large hemorrhage in tuberculosis is due usually to the existence of one or more blood vessels lying on the surface of or passing through a cavity unsupported. Coughing or other mechanical strain or simple erosion ruptures these vessels. Due to the fibrosis present their walls have lost their normal elasticity and power to contract. Bleeding is, therefore, copious and likely to continue. Our largest and most fatal hemorrhages occur in patients with the greatest amount of fibrosis, those, in other words, in whom the tendency to recovery is strong, or in whom recovery has already taken place. Large hemoptysis in patients with highly active tuberculosis is a rare condition both in the sanatorium and in our private experience. Patients who hemorrhage, therefore, undoubtedly have a strong tendency toward recovery, a medical fact whose recognition dates back many centuries. Furthermore bleeding in pulmonary tuberculosis is usually from the pulmonary system and, therefore, under a low head of pressure.

Those of us who have tried calcium lactate, morphin, serums and the more recent additions, blood transfusion and pituitrin have been badly disappointed and those of us who have had the opportunity have abandoned these practices except as they may be used coincidentally with an artificial pneumothorax. Lung collapse should be the first, rather than the last measure to be considered. Relatively small amounts of filtered air or nitrogen introduced between the two

layers of the pleura will rest the lung from the motion of respiration and will relax the elastic tension normally present which holds the torn vessel apart, and if sufficient quantities can be used will produce direct pressure over the bleeding site and expel extravasated blood from the surrounding tissues. Subsequent pneumonia is very much less likely to occur under such circumstances. The operation is simple and comparatively safe in experienced hands. It can be done in any private home almost as easily as in the sanatorium or hospital. In my series of 113 patients treated by this method for the control of hemorrhage, three have been done in general hospitals, and nine in private homes away from the sanatorium base. Instruments were carried to the patient and used at the bedside. The only anesthetic used is novocain and adrenalin. Injection of the pleural space is made through an 18 gauge needle and enough measured gas under measured pressure can be given at one sitting to control most hemorrhages. Second or third injections are necessary in obstinate cases but the great majority have ceased to bleed after the first treatment. Complete positive pressure pneumothorax is rarely necessary to control bleeding. It can be done at one sitting only where the patient's general condition is good and where the operation is chosen early before prolonged bleeding has weakened the patient and infiltrated the lung. Transfusion and stimulants are used where indicated.

It has been my experience that the chief danger in hemoptysis is not exsanguination; I fear the accompanying pneumonia a great deal more, and in all but one instance where death has occurred within one month after collapse for hemorrhage, five in this series, death was due to pneumonia. In one instance a large ruptured hilus vein was responsible for a death in forty-eight hours, a complete positive pressure pneumothorax being insufficient to control it. This amply warrants the statement that the time element is exceedingly important. The operation should always be done as early as consistent with fair judgment as to its necessity. Half a day of slow continued bleeding, or half an hour of brisk hemoptysis is sufficiently alarming to warrant surgical interference. I also feel that the operation is indicated whenever physical signs show that more than the local bronchial system or cavity are flooded, as evidenced by suppressed breath

sounds over the bleeding area. Operation at this point will not only minimize the danger of serious bleeding, but will decrease the incidence of pneumonia, so justly dreaded and difficult to combat in weakened and exsanguinated patients.

The question now arises as to what should be done in case pleural adhesions are sufficiently extensive to prevent collapse. As has been stated previously, complete collapse is unnecessary in most instances, even small pockets occasionally being sufficient to produce the desired result. Complete pleural synthesis is distinctly uncommon in my experience, and the operation for the control of hemorrhage can usually be made adequate. Exclusion features which would prevent the continuance of pneumothorax beyond the mere control of hemorrhage need not be so rigid if this is the only end sought. At times I have collapsed, and I feel, have saved patients with more or less extensive disease on the opposite side, but in these patients the pneumothorax has not been maintained. Where pleural synthesis is complete I have found the extensive use of sand-bags on the involved side, fifteen to thirty pounds according to the patient, and the use of one of several forms of chest splints, or even adhesive plaster strapping, all prove of distinct value. Its mode of action is similar to pneumothorax, though, of course, far less effective. Two patients in my thoracoplasty group in which complete pleural synthesis had taken place were operated on by the Wilms-Sauerbruch technique primarily for the control of hemorrhage, with excellent results. Both patients had had repeated bleeding over long periods of time and several attempts at pneumothorax had failed. They were fortunate in having no extra pulmonary involvement and exceptionally good lungs on the opposite side. While admittedly thoracoplasty is not to be used indiscriminately for this sort of work, I feel that it still has a place and should be mentioned. The permanency of this mode of treatment and the fact that it must not be done at the time of active bleeding makes its use in this connection a rather hazardous procedure and should never be undertaken lightly. It is also a prime requisite that patients must be in general, in much better condition than would be demanded for the more simple operation.

It is not my intention at this time, to go into the use of pneumothorax as a treatment for tuberculosis aside from the hemorrhage features

other than to offer the following comment: wherever a pneumothorax has been established for the control of hemorrhage, a thorough and complete study should be made before releasing the patient, as to the advisability of continuing the pneumothorax as a general therapeutic measure. Patients who bleed once in large quantity, are likely to do so again, and repeated pneumothorax becomes increasingly difficult due to the production of adhesions. In several instances in my series pneumothorax has been produced more than once for the control of bleeding, and in two cases I have produced pneumothorax on the one side, and at a later date have produced another pneumothorax on the opposite side, in both instances for hemostatic purposes. From my experience with this operation I would advise abandonment of a pneumothorax not later than one month after the initial operation, provided one does not intend to continue beyond the period of hemorrhage control. Few, or no adhesions will form in an artificial pneumothorax unless it has been maintained for one month or more. We should be careful not to rob our patients of a valuable therapeutic measure which may at some time be imperative by the maintenance of our pneumothorax too long unless, of course, we intend to keep it for therapeutic purposes. I might state also that I have rarely been in doubt at the end of one month of pneumothorax treatment, as to just how much a patient might be expected to gain by its continuance beyond that period. In conclusion I wish to summarize as follows:

1. Artificial pneumothorax amply fulfills all the surgical principles for the emergency control of hemorrhage from the lung, viz., physiological rest of the parts, relaxation of tissue tension and local pressure.

2. The operation is simple and comparatively safe in experienced hands and has the advantage of local anesthesia.

3. The operation is portable and can be done practically anywhere with proper apparatus. Moving these patients is undesirable and usually unnecessary.

4. It is applicable to a much greater percentage of patients than now receive it and should be considered in all cases of pulmonary hemorrhage. Too rigid exclusion features are unfair to the patient.

5. It is the safest and most reliable means for the purpose at our command.



6. Artificial pneumothorax should be done early lest fatal pneumonia intervene. The latter kills far more patients than actual exsanguination.

#### DISCUSSION

Dr. M. Earl Brennan, East St. Louis: I would like to ask Dr. Cole if he has had any experience with pulmonary hemorrhage following dust irritation of the lung.

I will ask him another question. It is not generally taught that acute pulmonary hemorrhage is rarely fatal; that they will always bleed until the patient is weak enough so that they stop themselves.

Recently I had a case in which a man evidently had never had any symptoms or indications of any lung trouble. He ran about two blocks from the street car to his home in the rain. Upon reaching home he began to hemorrhage rather severely, and continued hemorrhaging for about sixteen hours, and died. I was rather surprised because we generally feel that pulmonary hemorrhage very rarely continues to produce death.

Dr. Herman Harrison Cole, Springfield (closing): The doctor asked whether we saw any cases of pulmonary hemorrhage following dust irritation of the lung. We get very few in Springfield. We do get some hemorrhage from coal dust, but they are distinctly uncommon. I question seriously whether they are a straight coal dust proposition or street dust. Fibroid tuberculosis is most likely.

I remember distinctly one patient who was a chemist who was working with chlorine gas. He had a very extensive fibrosis through both lungs. He had a very severe hemorrhage. I think of one other case who is under my care at the present time. He is an acetylene welder. He has lungs which I imagine must be about the consistency of leather. I had to use exceedingly high pressure to produce collapse. He has had several attacks of minor hemorrhage. Beyond those two I remember no others of that type.

The question of fatality in pulmonary hemorrhage has come up. I think that is a very difficult thing to answer. I don't know. If you let all hemorrhages alone I don't know how many out of one hundred would be liable to die. I should say, from direct hemorrhage—this is, of course, a guess—that not over two per cent. will die from actual bleeding, but the mortality will run to anywhere from ten to twenty per cent. following hemorrhage due to infection.

The four or five fatalities I have had from hemorrhage in the last six or seven years have been due directly to pneumonia.

Dr. Holmes mentioned the case at Fairview. I remember that patient very well. The patient had very extensive adhesions all through the pleura on one side. I am very glad to hear that the patient has not bled any more. I rather expected he would at a later date.

Aneurism I think is the true explanation of these cases. However, I do not believe that all of them

ulcerate through. I think some of them are ruptured directly by trauma.

#### A PLEA FOR THE FREER USE OF THE ASPIRATING NEEDLE IN THE DIAGNOSIS OF BREAST INFECTIONS

V. L. SCHRAGER, M. D.

CHICAGO

In the course of my clinical experience, I was struck by the fact that many cases of breast abscess came to the hospital after a prolonged period of poulticing or other schemes of treatment, all of which were entirely too tardy and conducive to unnecessary destruction of breast tissue. The general practitioner is either too faithful to the classical symptom complex of inflammation, or too eager to please the family, who invariably resent an operation.

There is another group of cases in which the delay is partly justifiable, because there are either none or only few of the usual signs of inflammation. Many cases present only a slight induration of the breast and no redness or edema.

Again, there are cases in which the liquefaction of tissue is central and it is impossible to detect fluctuation because of the thick layer of normal breast which separates the abscess from the examining finger.

In a very few cases, the abscess may be entirely submammary and, it would be folly for the doctor to expect fluctuation and redness in order to justify surgical interference.

I have encountered another group of cases in which the leucocyte infiltration, with subsequent connective tissue formation, developed far ahead of the liquefaction of the breast tissue, so that in these cases you find an excessive induration which dispels all suspicion of pus.

In a fair majority of cases, there is an indurated breast segment side by side with a liquefied one and, the diagnosis of one pocket does not cover the entire pathology of the case.

It has been my interesting opportunity to work close to the elbow of the general practitioner with whom I have consulted in a good many cases of breast abscess. The issue in most instances was the time and indication for surgical interference. In my experience, most of the doctors were subzealous rather than superzealous and they often missed the mark. On many occasions, the doctor was rather chagrined to find that the case, which

he thought was evolving toward an abscess, already had a well-developed abscess.

I found that in all cases of doubt, a good calibre aspirating needle with a well-fitting syringe was about the best consultant in the case. The procedure is very simple. It can be done with the aid of a little spray of ethyl chloride and practically no inconvenience to the patient. The excuse for calling attention to this method is based upon the large percentage of destroyed breasts out of proportion to the original segmental infection.

Another reason for the freer use of the aspirating needle is the failure of curing breast abscesses by a simple incision. If a patient, who has been apparently successfully operated upon and has free drainage, continues to have a temperature beyond the usual limits, associated with constitutional reaction, one must suspect early an adjoining pocket which does not communicate with the original incision. Here again, the aspirating needle will settle the question.

3417 W. Adams St.

#### YOUTHFUL CHRISTIAN SCIENTIST

He was only a little fellow, of not more than four years, and, as he entered the grocery store, his bare feet made such a slight noise that another customer who had just been waited on didn't know of his presence until she turned to go and stepped squarely on one of the small toes.

"Oh, dear, did I hurt you?" she sympathized as she realized her carelessness.

"Gee, no; I'm a Christian Scientist," came the reply, as the boy clasped the injured member in both hands and hopped about on his other foot.

#### CANNOT MEASURE INTELLIGENCE BY PHYSICAL SYMMETRY

"A healthy mind in a healthy body" is the new slogan. But are good minds necessarily domiciled in healthy bodies? The history of the race does not prove it. There is something about a healthy body, apparently, that does not lure a good mind. It is probably too healthy. No; you cannot sort out intelligence by physical symmetry.—CLARENCE DARROW, *American Mercury*, June, 1926.

### Society Proceedings

#### ADAMS COUNTY

February 13, 1928. This was the regular scientific meeting of the Society held at the Elks' Club. It was

called to order by the President at 8:25 P. M. with 27 members and two guests in attendance. The Secretary presented a series of collection letters to be published in the name of the Adams County Medical Society for their approval. This matter had already been approved by the Council. After considerable discussion a motion was carried that the letters be referred to an attorney by the President of the society for advice in regard to their legality. Drs. R. E. Graber and John Montgomery West were elected to membership.

The program was supplied by the Marion County Medical Society of Missouri. Dr. H. B. Goodrich of Hannibal presented a paper on "The Prevention of Puerperal Infection." This was discussed by Drs. Brenner, Wells, Baker, Montgomery and Aldo Germann. Dr. F. E. Sultzman of Hannibal presented a paper on "Throat and Upper Respiratory Infections." This was discussed by Drs. Stevenson, McReynolds, Beirne, Cohen and Knox. Both papers were thoroughly enjoyed and the speakers expressed themselves as highly delighted with this form of interchange of programs between the two societies. The President then called for a rising vote of thanks in appreciation to Drs. Goodrich and Sultzman for having addressed the society. Everyone responded. The Secretary made a few announcements relative to participation of our membership in programs to be put on at Hannibal and Keokuk next month. A meeting of the program committee with the President was called immediately after adjournment, which was made about 10:45 P. M.

HAROLD SWANBERG, M. D.,

Secretary.

#### COOK COUNTY

##### CHICAGO MEDICAL SOCIETY

*Regular Meeting, February 1, 1928*

1. Fractures Around the Knee Joint, W. R. Cubbins.
2. General Principles of the Pathology of Bone, J. P. Simonds.

Discussion—E. W. Ryerson, Philip Kreuscher, Philip Lewin, Paul Magnuson.

(Papers on the program furnished by Northwestern University Medical School.)

*Joint Meeting Chicago Medical Society and North Shore Branch, February 8, 1928*

1. The Significance of Wave Length in the Therapeutic Use of Light. (Illustrated.) W. J. Bovie, Professor of Bio-Physics, Northwestern University Medical School.
2. The Treatment of Gonorrhoea in Some European Clinics, J. S. Grove.

Discussion—Harry C. Rolnick, Daniel N. Eisendrath.

*Regular Meeting, February 15, 1928*

1. Factors Which Determine Neo-Natal Morbidity and Mortality, Clifford G. Grulee
2. Prevention and Treatment from the Standpoint of the Obstetrician, Wm. C. Danforth.



3. Prevention and Treatment from the Standpoint of the Pediatrician, Joseph Brennermann.  
General Discussion.

*Regular Meeting, February 22, 1928*

Medical and Dental Arts Building, Fifth Floor,  
8:30 P. M. Phone Central 3026.

Human Amoebiasis

1. Chronic Human Amoebiasis, L. M. Boyers, Berkeley, California.

2. Intestinal and Hepatic Lesions in Amoebiasis, Bowman C. Crowell, Department of Pathology, Northwestern University Medical School.

Discussion—Frank Smithies, A. A. Goldsmith.

### PERRY COUNTY

At the January meeting of the Perry County Medical Society the following officers were elected: Dr. E. J. Burch of Du Quoin, president; Dr. J. S. Templeton, Pinckneyville, secretary and treasurer; Dr. H. I. Stevens Tamaroa, Dr. F. B. Hiller, Pinckneyville and Dr. C. M. Brookings, Du Quoin, vice-presidents. Dr. Fisher of Du Quoin was elected delegate to the State convention and Dr. Max Adles of Du Quoin, alternate.

The Society met in the Browning Hospital at Du Quoin, February 16, and discussed uniformity of fees. It was decided to meet with other County Societies adjoining us and discuss fee bills with them.

On Tuesday evening, February 28, the Du Quoin doctors gave a banquet at the Browning Hospital in honor of Dr. L. V. Gates who will move to Ziegler soon to take charge of the hospital there. Besides the physicians of Du Quoin, Dr. H. I. Stevens of Tamaroa, Drs. Bert Coughlin and Fred Baily of St. Louis, Dr. Shear of Christopher, Dr. Harrell of Elkhville, Dr. Operdal of Valier, Dr. Garriss of Dowell, Dr. Geo. Tallerday of Louisville, Ky., Drs. G. F. Meade, F. B. Hiller and J. S. Templeton of Pinckneyville, were present.

### Marriages

ALBERT JAY BONER, Chicago, to Miss Ethel Levitan of Madison, Wis., Dec. 6, 1927.

JOHN E. EKSTROM to Miss Sybil Olson, both of Chicago, in October, 1927.

JOHN P. J. SHORE, Sailor Springs, Ill., to Miss Pauline Evans of Clay City, recently.

### Personals

Dr. Daniel B. Hayden addressed the Chicago Laryngological and Otological Society, February 6, on changes in labyrinthine responses produced by rapid blood pressure changes.

Drs. Roscoe Sensenich and Alfred S. Giordano,

South Bend, Ind., addressed the Chicago Society of Internal Medicine, City Club, February 27, on "Brucella Abortus Infection in Man."

Dr. Harry L. Parker, Rochester, Minn., addressed the Chicago Neurological Society at the Drake Hotel, February 16, on "Trigeminal Neuralgic Pains Associated with Multiple Sclerosis," and Dr. Hans H. F. Reese, Madison, Wis., on "Myelographic Studies of the Spinal Canal" (thesis).

A complimentary dinner was given at Rochester, Minn., February 1, in honor of Dr. Clarence W. Hopkins, chief surgeon of the Chicago Northwestern Railway, who has been associated with that corporation for twenty-five years. Following the dinner, which was attended by members of the Chicago Northwestern Railway Association and others, a presentation was made to Dr. Hopkins by Dr. Charles H. Mayo at a general staff meeting. The president of the Chicago Northwestern Railway, Mr. Fred Sargent, was present.

### News Notes

—Members of the staff of the Michael Reese Hospital conducted a clinical program before the Chicago Pediatric Society, February 21, in the Sarah Morris Building.

—The annual meeting of the Chicago Orthopedic Club was addressed, February 10, among others, by Dr. John Ridlon on "Rest in the Treatment of Chronic Joint Disease," and by Dr. Philip H. Kreuscher on "Demonstration of the Arthroscope."

—Northwestern University has sold its former medical school property at Twenty-Fourth and Dearborn streets to Wesley Memorial Hospital which it adjoins. The old school building will be torn down. Wesley Hospital now owns the entire block between State, Dearborn, Twenty-Fourth and Twenty-Fifth streets. While no immediate building project is contemplated, it is understood that the hospital will remain on the south side.

—At the four hundred and thirty-second regular meeting of the Chicago Gynecological Society, Murphy Memorial Building, 50 East Erie Street, February 17, Dr. Alexander M. Campbell, Grand Rapids, Mich., will read a

paper on "Chorea Gravidarum"; Dr. Jacob P. Greenhill on "Vaginal Discharge Due to *Trichomonas Vaginalis*," and Dr. Otto S. Pavlik, "Preservation of Ovary by Means of Intra-Uterine Transplantation in Radical Operation for Adnexal Disease."

—It is expected that the new children's building at the Cook County Hospital will be occupied soon, adding about 500 beds for children to the hospital and making its total capacity 3,200. The cost of the children's building has been about \$1,000,000. The total investment in hospital buildings of Cook County now amounts to \$14,000,000. The wards for children in this building are cubicled, the child always being in sight of the nurse. The fifth and sixth floors will be left unfinished for the present. The seventh floor is for physical therapy, and includes also schoolhouse and playrooms. The decorating has been done in cheerful colors. There is a lecture room, accommodating 100 students, and the building is connected by a tunnel with the general hospital. The staff of the children's hospital will comprise a number of prominent members of the faculties of Chicago's best medical schools.

—A preliminary report of the health department gives the Chicago death rate for 1927 at 11.52. It was 11.68 in 1926 and ten years ago, 14.79. It is stated that in 1927 diphtheria was 60 per cent more prevalent than in the previous year and much more fatal, the death rate being 14.1 per hundred thousand as compared with 7.3 in 1926. Pneumonia reached the highest point since 1921, with a death rate of 92.5 per hundred thousand. Measles reached its biennial peak, 17,726 cases being reported. Rabies accounted for eight deaths, the first in the city from this cause since 1920. There were twenty-nine deaths from infantile paralysis among 148 cases. Both death rates and percentages of total deaths were increased over those of previous years in heart disease, nephritis and cancer. The typhoid death rate fell to 0.74 per hundred thousand of population as compared with 0.79 in 1926, and the tuberculosis death rate to 82.7 from 83. Almost 2,000 more cases of venereal disease were reported than in the previous year. The total number of visits to the venereal disease clinics under the health department control was 200,639, an increase of about 14,000. The

city health department examined 6,817 women and 192 men brought in by the police for sex offenses, and of these about 10 per cent were found to have syphilis and about 25 per cent gonorrhea. The number of deaths of children under 1 year of age per thousand births reported was reduced from 66.6 in 1926 to 62.75 in 1927. An increase of 688 births was reported over the previous year, making a total of 60,888 and a birth rate of 19.62. Since school opened in September, a drive has been made to immunize children under 7 years of age against diphtheria; the number immunized during the year was 44,600, as compared with 19,141 in 1926.

—The president of the University of Chicago announces that the Home for Destitute Crippled Children, founded in 1892, will transfer its main hospital to the university campus on the Midway where new buildings providing 100 beds will be in operation by the summer of 1929. Part of the present plant of the home on Paulina Street and Maypole Avenue will be maintained as an emergency hospital and free dispensary for the needs of the west side. The building retained there will continue to be known as "The Nancy McElwee Memorial," as will the new buildings on the south side in memory of the daughter of Mrs. Elizabeth S. McElwee and her late husband, Robert. Mrs. McElwee, who for thirty years has sponsored work among crippled children, has given \$300,000 for the new building. Mrs. Gertrude Dunn Hicks has given another \$300,000 to the university for an orthopedic hospital which will be used to erect the other division of the building to house the home and will be known as "The Gertrude Dunn Hicks Memorial." The Home for Destitute Crippled Children will continue to operate the hospital as heretofore, the university providing the medical care. President Mason, in making the announcement, considers this another step toward establishing at the university a clinic for children similar to those in Vienna and Berlin. In addition to the home, the units assuring children's work at the university include the Bobs Roberts Memorial for Children, the Charles Gilman Smith Memorial for Infectious Diseases, the Chicago Lying-In Hospital, and the Country Home for Convalescent Children at Prince's Crossing near Wheaton, which will provide about 350 beds when completed. Ninety-



five children are living in the Home for Destitute Crippled Children at present. In its files are histories of nearly 18,000 cases, 1,130 having been treated in the hospital last year. It is considered one of the outstanding organizations of its type in the country.

—The University of Chicago Medical Clinics and the Otho S. A. Sprague Memorial Institute have organized a co-operative program to continue the treatment and study of pernicious anemia inaugurated by the late Dr. Karl K. Koessler. Beds have been set aside in the Billings Hospital for the care of patients, and the laboratories of the Institute will conduct their part of the program. A limited number of patients who cannot finance their own hospital care will be supported during the course of their treatment by the institutions engaged in the work.

## Deaths

FINIS E. BELL, a Fellow A. M. A., Mattoon, Ill.; Medical College of Ohio, Cincinnati, 1880, at one time mayor of Mattoon; formerly on the staff of the Memorial Methodist Hospital; aged 74; died, January 16, of chronic nephritis and uremia.

TRUMAN WILLIAM BROPHY, a Fellow A. M. A., for many years dean and professor of oral surgery, Chicago College of Dental Surgery, died, February 4, at the Lutheran Hospital, Los Angeles, of bronchopneumonia, aged 79. Born in Illinois, Dr. Brophy graduated from the Pennsylvania College of Dental Surgery in 1872 and from Rush Medical College in 1880, at which time he was made professor of dental pathology and surgery. He was formerly president of the Chicago Dental Society and the Illinois State Dental Society, and in 1882-1883 was secretary of the Section on Dental and Oral Surgery of the American Medical Association. Dr. Brophy was president of the United States section of the thirteenth International Medical Congress in Madrid in 1903, and for many years president of the International Dental Federation; he received the Miller Prize of the federation in 1925. He was an officer of public instruction in France in 1913 and was made an officer of the Legion of Honor in 1924. Dr. Brophy was oral surgeon to the Frances Willard and Michael Reese hospitals, Chicago, was the author of "Oral Surgery," and "Cleft Palate and Cleft Lip," and was a member of many scientific societies in this country and abroad.

JOHN NELLIS DALY, Freeport, Ill.; Rush Medical College, Chicago, 1895; a Fellow A. M. A.; aged 57; died, January 15, at a local hospital, of uremia.

CLARENCE WILSON EAST; Springfield, Ill.; Northwestern University Medical School, Chicago, 1904; a

Fellow A. M. A.; chief of the division of child hygiene and public health nursing of the Illinois State Department of Public Health, 1918-1923; medical director of the Society for Crippled Children of Illinois; medical superintendent of St. John's Sanitarium; aged, 58; died, January 28, at Irvington, Ala., of cardiorenal disease.

EUGENE FRANKEL, Chicago; University of Basel Switzerland, 1896; member of the Illinois State Medical Association; aged 58; died, February 5, of carcinoma of the larynx and mediastinum.

ORSUM WILLIAM GREEN, Elmhurst, Ill.; Hahnemann Medical College and Hospital, Chicago, 1886; aged 81; died, in January.

KARL KONRAD KOESSLER, Chicago; University of Vienna, Austria, 1905; a Fellow A. M. A.; associate clinical professor of medicine, Rush Medical College and professor of experimental medicine, University of Chicago; member of the Otho S. A. Sprague Memorial Institute; the American Society for Clinical Investigation, the American Association of Pathologists and Bacteriologists, the American Society for Experimental Pathology, the American Association of Biological Chemists, and the Society of American Bacteriologists; past president of the Chicago Pathological Society, the Chicago Society of Internal Medicine and the American Society for the Study of Allergy; on the staffs of the Cook County Hospital and St. Luke's Hospital; conducted research on scarlet fever and other diseases, and more recently on the treatment of pernicious anemia by means of special diet; aged 48; died, February 13, of chronic nephritis and heart disease.

JOSEPH HENRY MCGOVERN, Lenzburg, Ill.; Rush Medical College, Chicago, 1897; deputy coroner; aged 59; died, January 13, of nephritis.

LOUIS LOWENTHAL, Chicago; Chicago Homeopathic Medical College, 1879; aged 89; died, January 11, of senility.

JOHN COLE, Williamsfield, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1882; Civil War veteran; formerly a druggist; at one time postmaster of Elmore; aged 80; died, Dec. 22, 1927.

FRANCIS F. WISNIEWSKI, Chicago; Chicago College of Medicine and Surgery, 1910; member of the Illinois State Medical Society; aged 43; attending surgeon to the Norwegian-American Hospital, where he died, Feb. 2, of cerebral hemorrhage and shock, following a fall while skating.

NINUS S. PENICK, Springfield, Ill.; Northwestern University Medical School, Chicago, 1891; member of the Illinois State Medical Society; formerly part owner of the Prince Sanitarium, where he died, January 11, of cirrhosis of the liver and pulmonary edema, aged 62.

BOYLE VANCE, Chicago; University of Michigan Homeopathic Medical School, Ann Arbor, 1889; aged 61; was accidentally shot and killed, February 5, at his home in Homewood, while cleaning a gun.

# End Results in Infant Feeding

Nutritional disturbances such as Marasmus, Decomposition, Atrophy, Intoxication, etc., are usually *the end results* of mild beginning fermentative diarrhoeas. Fermentative diarrhoeas are in turn the end results of improper carbohydrate in the infant's intestines.

Carbohydrate, a portion of which is not absorbed rapidly enough, is attacked by the acid-forming bacteria which results in a diarrhoea.

This form of nutritional disturbance is often corrected in its early stages by the administration of Mead's Casec (calcium caseinate) the principal protein of cow's milk. This is in accordance with the Finkelstein theory that protein inhibits the growth of the acid-forming organisms.

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# Illinois Medical Journal

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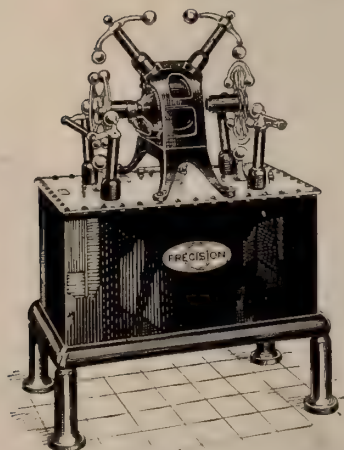
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# ILLINOIS MEDICAL JOURNAL

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No. 4

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## Editorial

### DISTRICT CHAMBER OF COMMERCE AND MEDICAL PROFESSION UNITE IN REFUSAL TO PERMIT INSTAL- LATION OF UNNECESSARY FREE MEDICAL DISPEN- SARY IN SOUTH CHICAGO

An illuminating example of the potency that the doctor can have in public affairs is illustrated by the present free dispensary situation in South Chicago.

Here is a noteworthy exemplification of the principle that the ILLINOIS MEDICAL JOURNAL preaches constantly.

Because a number of physicians in the South Chicago branch of the Chicago Medical Society are alert enough to know what is going on in the community and happen to be members of the South Chicago Chamber of Commerce, that section of the city has been saved from a shamelessly marauding invasion by socialized medicine.

This attempt to plant the seeds of wholesale debauchery of the medical profession failed at its inception. To make matters worse, this scheme masqueraded under the unsuspecting cloak of the University of Chicago through the antics of the Chicago Lying-In Hospital, recently affiliated with the great educational institution of which Rush Medical College is so virile a part.

As Dr. J. B. DeLee, the head of the Chicago Lying-In Hospital, ignored completely the ethical practicing physicians in the section where he planned to establish his dispensary, and made his appeal directly to the South Chicago Chamber of Commerce, just what might have happened if there had not been doctors sitting in the Chamber of Commerce, is plain to be seen. As it was, the physicians who are members of that council had the whole inside workings of Dr. DeLee's plan from the start and were in a position to ex-



pose to the community the extent and the outrageousness of the DeLee plan.

The result is not only a great beneficence to the public health and welfare but one of the most brilliant pieces of community cooperation between the physician and the general public that has been reported. For the sake of the example that may be set to other communities and other members of the medical profession, it is interesting to recount what can be accomplished when members of the medical profession everywhere keep alive to the situation now almost universally confronting the profession and the sick.

Voluminous correspondence passed between Dr. J. B. DeLee and the South Chicago Chamber of Commerce. There was no correspondence at all between the Chicago Medical Society or any of its branches, and Dr. DeLee upon this subject of considering the entire community of South Chicago a pauper section, and putting into its midst a free dispensary, specializing in obstetrics known as the Chicago Lying-In Hospital Dispensary, and practically turning over into the hands of one man and his practically privately controlled corporate institution the entire practice of obstetrics in a section where the resident physicians as well as the Chamber of Commerce were agreed that no such so-called charitable control or pauperization was necessary or in fact indicated in any degree.

The correspondence between Dr. DeLee and the South Chicago Chamber of Commerce is now on file in the offices of the Chicago Medical Society. *There is no correspondence between Dr. DeLee and the Chicago Medical Society and its individual members that can be placed on file.*

Only the attitude of the South Chicago Chamber of Commerce brought Dr. DeLee into even verbal discussion of the subject with the South Chicago Branch of the Chicago Medical Society. The stand of the Chamber of Commerce practically forced Dr. DeLee into an appearance before the South Chicago Branch of the Chicago Medical Society for a presentation of his proposition. Dr. DeLee said what he had to say at length. His valedictory as he left the meeting was that no matter what the doctors thought about his dispensary that it was going to be established. This parting shot was delivered to the chairman as he escorted Dr. DeLee from the meeting. Wisely

enough this ultimatum was not delivered from the platform.

While the matter was under discussion at the Chamber of Commerce, Thomas McKenney, the superintendent of safety and labor for the Illinois Steel Company, arose and remarked that in the more than twenty years he had been working in that capacity for the corporation he represented, that he had always found the reputable physicians of the South Chicago district ready to do charity in all worthy or even doubtful cases, and that he had never yet met with a refusal from any doctor of a donation of professional services for a charitable case.

Any committee on ethics of any reputable medical organization will find food for thought in a careful perusal of some of Dr. DeLee's correspondence with that lay organization, the South Chicago Chamber of Commerce. It will be found that the doctor cheerfully writes what can easily be construed as a promise of guaranteed cures on the part of his institution and his directions. Under date of January 2, 1928, Dr. DeLee wrote to A. L. Blocker, secretary of the South Chicago Chamber of Commerce and said in part:

"We send a doctor, a student and a nurse to the woman's home to take care of her, and we have developed a method which prevents childbed fever and sore eyes in the baby and guarantees a quick recovery from the confinement."

Please note that "*we have developed a method*" and the "*guarantees a quick recovery from the confinement.*"

The physicians of South Chicago should be congratulated on the efficiency in every branch of public service that their community receives. It is recommended again that their example be followed by medical societies everywhere.

---

YOU AND YOUR SOCIETY—WHAT DO  
YOU KNOW ABOUT IT? WHAT  
CAN YOU DO FOR IT? DO  
YOU DO ANYTHING?

Today's world works by organization. The mass movement is a direct complement of the machine age.

Men who complain that they have no interest in organized medicine and that they could not get anything out of it, even if they did, might well stop for a time and take stock of them-

selves as well as of organized medicine, its benefits, products and demands.

Along with the machine age came the great mastodon of personal selfishness known in the vernacular as "The Gimmes."

Not what we can give, but what we can get, is the terrible "Winter of Discontent" congealing the altruism of many an otherwise heroic citizen.

Old as Greece is the adage that a man takes away from the oracle that which he brings thereto. What are you, brother dissenter, going to give to organized medicine to pay for what you get? Remember the day of miracles endures, but Santa Claus and Fairy Godmothers are off and away to another world. Science banished myths. Hence science must swallow its own medicine—modern magic is persistent, self-less labor for the common good.

The county society is as good as its members make it. Ask yourself how much of an effort *you* put forth. In other words, where the county society is concerned, how much do you throw in the plate? How much will the society have to dispense in the way of success as to programs, standing, and education from interchange of experience, if each individual other member does as you yourself are doing in relation to your county society? Go a little further. Apply this same rule to the sessions of the state society; to those of the A. M. A. Use the measure of your own interest, labor, and general expenditure in behalf of each organization, as the individual calculator for all of these sections of organized medicine. Where would these societies be if you ranked at par? Do you feel proud or ashamed of the answer?

Ask yourself, also, what degree of fraternal spirit, of co-ordinated effort, of mutual protection, for the profession and for the public health, would exist, if your own contributions were the standard unit of measure or of evaluation?

How many papers have you read before your county or other local society? Why? *Weren't you asked?*

If you haven't been invited to take part in these programs, did it ever occur to you that your own attitude of indifference may be keeping you from just recognition in your community, and, what is more to the point, and more sad to contemplate—probably locking up in your own

silence some item of knowledge, some vital experience of your own that might be of tremendous, nay, even of vital importance to the health of the community, or to the preservation of some individual life. Often scientific premises vary with conditions. What you have learned about your community your confreres deserve to know, in so much as generalities are affected.

A man must plant to reap. If you fail to show enthusiasm for your work, instead of mere contentment; if you are not willing, aye, eager, to discuss with your fellow workers, angles and details of each fresh presentation of old subjects that comes under your observation, you are apt to awaken some day and to find yourself, tailing along at the end of the profession instead of marching gaily in the van of the army.

The well-informed man has plenty to share with his fellows. The generous man learned in his youth that the second crop of geranium blossoms follows only after the first has been snipped away. The same holds true of a well kept rose garden. Bushes where blossoms are guarded too zealously are prone to shrinkage of crop by default. Will it be that way with you?

Officers of the county society desire programs that will interest members and to find those who have something to say, an overflow of energy to give his confreres, men who study, who keep records of their cases, and who take an active part in the discussion of the papers which other doctors present. An enthusiastic man can not remain in obscurity.

Well has it been said: "Keep posted on the new developments along the lines in which you are especially interested. Get a medical hobby and ride it hard. Be prepared to accept the "falls" your confreres will take out of you. Keep yourself "loaded" to answer their questions and arguments.

"When you receive the program of the next county meeting, look over the subjects presented. Get down your text-books. Read up so that you will be prepared for discussion.

"Do this regularly. Add greatly to the interest of the meetings. Points will be brought out vastly helpful to you. Moreover, you will gain the reputation of being a well-posted man and will be asked to present papers before the society.



"When you have a paper to prepare, do this thoroughly. Go over your cases for material to illustrate points you want to bring out. Consult text-books. Go over your paper with the A. M. A. style book. Get it into sound and attractive literary form.

"The only ethical way in which a physician can advertise is by writing articles for the medical journals. By published communications, both original and well-presented, your field of usefulness will become enlarged.

"Follow out these ideas consistently and regularly year after year. There will be no limit to your progress except those you set for yourself."

Doctor, think it over.

---

### SPECIALISM RUNNING WILD—AN ATTENDANT FOR EACH AND EVERY NERVE

"An apt valuation seldom dies. 'Truth crushed to earth will rise again,' so does the epitomization of an unchanging condition endure, provided in the first place 'Father was right.'"

A correspondent has asked that the JOURNAL shall reprint from "Judge" magazine this clipping, that appeared later in the *Journal of the Medical Society of New Jersey*. The article is a modern tribute to the skill of court jesters of yester year. "If the shoe fits, let the profession put it on."

Headed "Specialists, specialists, but not a doctor in sight," the article, signed by Don Herold, reads in part:

"Who remembers when we used to call a doctor in case of sickness? Nowadays we have to be mighty delicate about that. We might get an inch over the boundary line, and call a doctor for the wrong organ. Lots of people just die now rather than decide which specialist to summon.

"In the big cities at any rate there is nobody to come and see us when we are 'just sick.' We have to know exactly where we are sick and what ails us.

"Half the time we are sick in between organs, so there is nobody in town to cover the situation. The only thing to do is to wait until the disease shifts to some part of our anatomy covered by a specialist of whom we happen to know.

"What is needed is a medical brokerage service.

When theatres became so numerous in New York, for example, that it was impossible to run around to all of them to decide what show to see, ticket agencies naturally sprung up where you could stand in front of a counter and get a seat for any show in town. We need McBrides and Tysons for the medical profession. We need medical brokers who will send us where we belong.

"Once there used to be a few accepted kinds of specialists—ear, nose and throat men, for instance. Why, gosh, a man who covers the ear, nose and throat today is almost a general practitioner. There are now twenty-seven kinds of nose doctors alone. A man can now devote his whole life to the outside of the inside ear.

"Back in Bloomfield the same doctor used to bring us and bury us. Here in New York, the obstetrician gives us a slap and a promise and turns us over to the pediatrician. There is a new doctor down the line every fifteen or twenty minutes from the cradle to the grave. People are not only chopped up into sections geographically but chronologically.

"A liver man will not even listen to young lungs. A heart man does not care how you are—all he knows about is hearts. And practically none of the new-fashioned doctors cares how you feel.

"Let us pray that this intense specialization does not spread to other fields. It may be well and good to peddle a stomachache all over Manhattan before finding a buyer, but may we be spared from dragging a motor car all over the city to find 'the right man.'

"Oh, no, we don't touch that. You will have to take your car to a rear axle specialist. We concentrate on those teeny weeny little wires in your spark plugs. And for that hoarseness in your klaxon you should see Croupem, the horn man."

---

### SUMMER CLINICS

Plans are under way for the Summer clinics to be held in Chicago, June 18 to 30, under the auspices of the Chicago Medical Society. These clinics, more elaborate than those held in previous years, will be so arranged that visiting practitioners may devote their entire day to the pursuit of medical, surgical or special studies. A regular schedule will be provided and a continuous pro-

gram carried out. Only a limited number of students can properly be cared for by each clinician and admission will be by card only. These clinics will be held the two weeks after the meeting of the A. M. A. Secure your reservations by communicating with the Chicago Medical Society, 185 N. Wabash Avenue, Chicago.

### NEEDLESS CHARITY MOST EXPENSIVE ITEM ON TAXPAYER'S BUDGET

That "the taxpayer is fed up on digging down to pay the health bills of an ever-increasing army of drones" is a statement made by Alderman Garnet Edwards of Windsor, Ontario, Can., that is attracting much attention. This comment was made by Alderman Edwards following a report and discussion of the recommendations of The Social Service Commission of that city.

Expressing this concern over the marked increase in charitable expenditure this comment is ably made:

"Just how much longer the process of pauperization will be allowed to go on depends on how soon the fellow who foots the bills realizes that he is being exploited and rises on his hind legs to curtail the activities of a great many of these so-called social service agencies. As we've said before, something must be done to cut down the ever-increasing cost of charity.

"Inauguration of free dental clinics for indigents, as recommended by Miss Nellie Wark, supervisor of the Windsor social service commission, is 'carrying the good work to extremes,'" continues Alderman Garnet Edwards in his demand for a check on charitable expenditures.

"It's my opinion we're going too far," asserts Edwards. "The attitude of older generations was 'dig in and lay up for the future or else do without.' But it seems different today with all these service clubs springing into being and it's getting so that the people who keep working and have to pay the shot are getting 'fed up.'

"If it keeps up they'll argue that they would be better off if they quit work altogether and threw themselves on the mercy of the various charitable organizations."

### EUROPEAN TOUR FOR PHYSICIANS IN 1928

For those members of the profession who may be considering a summer tour in Europe, attention is called to the program proffered by the Lifsey tours on an arrangement that will consume six weeks of time, cost \$600 from New York City to New York City and will tour partially England, Germany, Switzerland, Italy and France. The side trips are unusual. The party will embark July 7 for England on the S. S. Ryndam.

The German health resorts will receive especial attention. London, Brussels, Cologne, Lucerne, Genoa, Milan, Nice, Paris, Avignon, Interlaken and Boulogne are a few of the cities on the itinerary. Despite the low price, these tours are held to be both competent and comfortable.

Detailed information may be obtained from the JOURNAL or Lifsey Tours, Inc., 527 Fifth Avenue, New York City.

### AUSTIN HOSPITAL SOLD, STOCKHOLDERS LOSE

The following clipping from the *Austinite*, a local paper, records the finish of Dr. Blaine L. Ramsay's hospital enterprise. It is said that trustful stockholders lost well above a half million dollars.

#### AUSTIN HOSPITAL SOLD FOR \$738,000

Removal of the Frances E. Willard National Temperance hospital from its present quarters at 710 South Lincoln street to the Austin hospital at the northeast corner of Central avenue and Flournoy street was announced recently with the purchase of the property at a reported \$738,000.

The Austin hospital comprises seven stories, containing 140 rooms. It was sold by Edwin B. Buell, trustee in bankruptcy, on the order of Garfield Charles, referee in bankruptcy. Herman Fischer of Campbell & Fischer and Louis Cohen were attorneys in the transaction.

### THE MEDICAL AND DENTAL ARTS CLUB

Extends a most cordial invitation to all ethical physicians and dentists to visit them and inspect their new club rooms on the 22nd and 23rd floors of the Medical and Dental Arts Building, 185 North Wabash Avenue, corner Lake Street. At the Bureau of Information a schedule of



clinics, hospitals, colleges, societies can be secured. Luncheon and dinner are served and there are private dining rooms for parties and committee meetings. Ladies are most welcome. Courtesy cards are issued.

---

ANNUAL CONFERENCE OF THE AMERICAN ASSOCIATION FOR THE STUDY OF GOITER—DENVER, COLO.,  
JUNE 18-20, 1928

The American Association for the Study of Goiter, consisting of internists, pathologists, radiologists, etc., as well as surgeons, will hold their fifth annual Conference on Goiter in Denver, Colorado, June 18th, 19th and 20th.

Several men from foreign countries have signified their intention of attending. Professor Breitner of the Von Eiselberg Clinic, Vienna, and Professor Albert Kocher of Berne, Switzerland, have accepted places upon the program.

Addresses and discussions on prophylaxis, medical treatment, endemic goiter and cretinism from the public health standpoint, are on the program for the first afternoon.

Pathology, various phases of surgical treatment, etc., will be considered the last two afternoons.

The Denver Medical Society has elaborate arrangements made for diagnostic clinics and will furnish good operative clinics.

All members of State Medical Societies are invited to attend.

Dr. Gordon S. Fahrni of Winnipeg, Canada, is the president and Dr. Kerwin Kinard of Kansas City is vice-president.

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TAZEWELL COUNTY MEDICAL SOCIETY  
PLACES COPY OF MEDICAL HISTORY IN EVERY LIBRARY  
IN THE DISTRICT

Tazewell County Medical Society has set an example that might well be followed by each of the other 101 counties in the state. N. D. Crawford, secretary of the Tazewell County Medical Society, sent in an order on March 15 for a copy of "The History of Medical Practice in Illinois" to be placed in each public library in Tazewell County. By making this volume so easily available to the lay public as well as to the profession,

Tazewell County Medical Society has performed a kindness to community welfare and achieved a loyalty to the medical profession many times more valuable than the comparatively slight cost of the histories to the society.

---

COMPULSORY HEALTH INSURANCE  
PROVES FAILURE IN ENGLAND—  
THE UNITED STATES  
MUST AVOID THIS  
PITFALL

Various reports have reached the editor of this JOURNAL that revival of Compulsory Health Insurance is an imminent menace.

Any indication of this sort, anywhere, is a fundamental danger, that should not be tolerated for an instant in any section of the United States.

The A. M. A. condemned initial propaganda of this sort at the meeting in New Orleans, following a determined, well-informed, instructive and revelatory campaign against the evils of the panel system or Compulsory Health Insurance, a campaign that was due entirely at the outset to the farsightedness of a scattered group of a few physicians in Illinois and New York.

For the benefit of those who have forgotten the contentions against Compulsory Health Insurance that were then presented to the profession at large, citation is made of a few statistical comments about the workings, or rather the failure of Compulsory Health Insurance in England.

The citations as presented here are based upon a recent article in the *Bulletin of the A. M. A.*, January, 1928.

Against the evils of state medicine, the public has frequently and wisely been warned again. As an example the "panel system" of England has invariably been held out to demonstrate the glaringly unsatisfactory results of modern state medicine. But many people do not fully appreciate what is meant by "state medicine," nor what the "panel system" comprises.

"State medicine" may be defined generally as the extension of governmental activity in the health field through creating compulsory health insurance, or free and pay clinics; or distributing physicians; or seeking complete control of medical practice as a public utility.

Lloyd George's national health insurance act of 1911 in England is better known in America as the "panel system." This legislation provides that every person with an income of less than two hundred fifty pounds (approximately \$1,200) must carry health insurance with the government. The list of the names and ad-

dressers of doctors who have undertaken to treat "insured persons" is the "panel"—officially known as the medical list.

In 1924, each insured person paid an annual fee to the government of eleven shillings (approximately \$2.64). This capitation fee continues until the end of 1927. More than fifteen million persons are compulsorily insured in the British Isles, and after fourteen years of unhappy experience, both patients and doctors find the system very unsatisfactory. Some of many reasons for the failure of state medicine in England are:

1. It is an enormous expense to the government.
2. It encourages perfunctory, inferior service and inadequate medical treatment. The doctor receives compensation whether his services are good, bad or indifferent. This is a terrible situation for the people.
3. It develops large numbers of neurotics who run to the doctor with every conceivable ailment, whether real or imaginary. It encourages costly malingering.
4. Public dissatisfaction has resulted in an enormous increase of quackery and cultism.
5. The people lose the right of the individual to select their own doctor. This one item should condemn state medicine for the United States. Individual choice of a physician is an inalienable right.
6. It undermines medical initiative, does not recognize merit, forgets the stimulation of medical research and tends to paralyze medical progress.
7. It discourages the ambitious youth from the study of medicine and so leaves the field to men of inferior talent.

In America, we cannot afford to retard the progress of medical knowledge by government control. A scheme, such as the "panel system" is filled with restrictions, and swamped with intolerable "red tape" and graft. We dare not undermine the morale of the forces fighting against disease by placing the control of the sick in the hands of politicians. Public health must not be used as a pawn in a political game. Any system that will standardize sick people into herds and classes is a perilous experiment, inimical to public welfare.

### DON'T FAIL TO ATTEND THE 1928 ANNUAL MEETING

In arranging the program and clinics for the 1928 Annual Session, everything has been done with the idea of making this the best meeting any State Medical Society has ever had. Clinics at the various Hospitals and Medical Schools have been arranged carefully, and should appeal to the physicians of the Middle West. The Stevens Hotel Company is co-operating with the officers, and various committees, and are to be commended for their work. All hotel reservations are to be made direct from the Hotel Company, and not through committees as has

been the previous custom. It is hoped that all physicians and members of their families who are intending to be present at the meeting, will get in touch with the Hotel Clerks at once, and make suitable reservations.

The Ladies' Reception Committee, and Executive Committees selected by the Chicago Medical Society, has made elaborate plans for the Women's entertainment. It is hoped that many of the ladies will be present to enjoy their part of the meeting. Every physician should give his wife a special invitation to accompany him to the meeting, and give her the much needed (?) vacation May 8 to 11.

Pre- and Post-Session clinics of unusual interest have been arranged. We believe that there has never been a time when more interesting clinics have been arranged than will be held during the week of May 7 to 12, 1928, in Chicago.

The average attendance at our Annual meetings held Down-State, has been approximately 14 per cent of the membership. With the 1928 meeting in Chicago, and with the unusual plans that have been made, we should have far more than twice the attendance, and we have an unusual opportunity to make the attendance ratio the best of any Society at any previous meeting. Delegates to the Meeting to be seated in the House of Delegates should be selected carefully and they should attend the meeting. The House of Delegates is the real legislative body of our Society, and the position is one which should not be underestimated. Much important work is done each year by the House of Delegates, and this should be kept in mind when the component Societies make their selections.

Invitations will be sent to many hundreds of physicians in the states adjoining Illinois, and we are assured that many of them will take advantage of the unusual opportunity to enjoy the 1928 Annual meeting of the Illinois State Medical Society.

### MAKE HOTEL RESERVATIONS EARLY

The seventy-eighth annual meeting of the Illinois State Medical Society will be held at the Stevens Hotel, Chicago, May 8 to 11, 1928.

In anticipation of the largest and best meeting in the history of the Society, the committee on arrangements has inaugurated extensive prep-



arations for the meeting and entertainment of visiting physicians and their families.

The committee on hotel accommodations urges that reservations for the meeting shall be made early.

The Stevens Hotel, Society Headquarters, Michigan Boulevard, between Seventh and Eighth Streets, Chicago, will house the scientific as well as the exhibition features of the meeting.

Reservations should be made directly with the Hotel Stevens.

Below is an outline of the cost of rooms and of meals at the Stevens.

#### THE STEVENS ROOM RATES

Extra Value Without Extra Cost		
Number of Rooms	Single Rate	Double Rate
263	\$ 3.50	\$ 5.00
1242	4.00	6.00
943	5.00	7.50
278	6.00	9.00
181	7.00	10.00
93	10.00	15.00

Fixed-price meals:

#### JAPANESE LUNCH ROOM

Breakfast, 45c; luncheon, 65c; dinner, \$1.00.

#### COLCHESTER GRILL AND OAK ROOM

Breakfast, 60c and 75c; luncheon, 85c; dinner, \$1.50; Sunday dinner, \$2.00.

#### MAIN DINING ROOM

Luncheon, \$1.25; dinner, \$3.00 per person.

A la carte service is available in all restaurants at all meals.

#### REDUCED FARE ON RAILROADS TO CHICAGO MEETING

The Central and Western Passenger Associations have granted a reduction in rates to those attending the 1928 Annual Meeting of the Illinois State Medical Society in Chicago May 8th to 11th, 1928, on the Certificate Plan.

This rate reduction applies in all cases where the one way fare amounts to 67 cents or more, and for all members of the Society and dependent members of their families. The entire State of Illinois and St. Louis, Missouri are included in this action.

By the certificate plan, the following rules are made:

1. Tickets at the regular one way tariff for the going journey may be obtained from May 4th, to 10 inclusive. When purchasing tickets, the purchaser must ask for a Convention Certificate,—not a receipt.

2. Tickets should be purchased at least a half hour in advance of the time of departure of the train.

3. Certificates are not kept at all stations, and inquiries should be made in advance of the meeting so that they will be available, or at least find the nearest station where they can be obtained.

4. Immediately upon arriving at the meeting, and registering, all tickets must be deposited, and when the required number is obtained, they will be endorsed by an officer of the Society and validated by a special representative of the railroads. When the validated certificate is presented at the ticket office, the return ticket will be given at one-half of the regular rate.

It is hoped that all members of the Society, and their families will procure a Convention Certificate when going to the meeting so that there will be no difficulty in obtaining the required number to be assured of the reduced rate.

#### THE ANNUAL MEETING

To the Members of the Illinois State Medical Society: Arrangements have been made which should make the 78th Annual Meeting of the Illinois State Medical Society the best state society meeting ever held. The program is such that a record registration is expected.

The Stevens Hotel, planned especially for conventions, will house under one roof all scientific section meetings, all general meetings, all meetings of the House of Delegates, of the Council and of committees, the scientific exhibit and the commercial exhibit. The Stevens Hotel will also have ample accommodations at reasonable rates for all who attend the meeting.

Those making the addresses at the general meetings, the orations on surgery and medicine, and the guests of the scientific sections will be men of the highest standing in the profession.

Clinics have been arranged at the leading hospitals of Chicago for Monday, May 7, Tuesday morning, May 8, before the regular session and

for Saturday, May 12, after the regular session of the society.

In addition to the scientific programs at the Stevens Hotel, clinical section meetings have been arranged at the Cook County Hospital and the four Class A medical schools of Chicago. These will include in addition to presentation of cases, demonstrations of recent research in the pre-clinical sciences that are of clinical importance. At 5 P. M. on Tuesday, May 8, there will be a moving picture demonstration of the movements of the intestinal tract by Drs. Carlson and Luckhardt of the University of Chicago in the North Ball Room of the Stevens Hotel.

The address at the opening meeting, Tuesday evening, May 8, is by Olin West, Secretary of the American Medical Association, on "What Organized Medicine is doing for the Profession." On Thursday evening, May 10, there is to be a symposium on medical economics with ten minute talks by leading members of the profession touching on all aspects of this most perplexing and changing subject.

The commercial exhibits are the most extensive we have ever had and have been carefully selected according to the rules of the American Medical Association.

The scientific exhibit will compare favorably with that of any national society, thanks to the co-operation of the state and municipal health departments and institutions and the medical schools and clinics and hospitals of the state.

A delightful program is being arranged for the entertainment of the visiting ladies.

You will never regret attending this meeting, the program of which compares favorably with that of any local, state, regional or national meeting ever held and also gives you the opportunity to visit the new buildings of the medical schools and hospitals of Chicago.

Write at once to the Stevens Hotel and make your reservations.

Cordially yours,

NATHAN SMITH DAVIS, III,

Chairman, Committee on Arrangements.

#### NOTICE

All reunion dinners are to be held on Tuesday evening, May 8, or Thursday evening, May 10, at the Stevens Hotel. Please communicate with

Mr. Bowman of the Stevens Hotel at once to make adequate reservations.

N. S. DAVIS, III,

Chairman, Committee on Arrangements.

#### NOTICE

All internes, medical students and pre-medical students in the State of Illinois are cordially invited to attend the sessions of the Illinois State Medical Society and visit the Scientific and Commercial Exhibits. You are all urged to register as guests of the Society.

N. S. DAVIS, III,

Chairman, Committee on Arrangements.

### ILLINOIS STATE MEDICAL SOCIETY

SEVENTY-EIGHTH ANNUAL MEETING

Stevens Hotel, Chicago

May 8, 9, 10, 11, 1928

#### OFFICERS

President, G. Henry Mundt, Chicago.

President-Elect, John E. Tuite, Rockford.

First Vice-President, A. T. Leipold, Moline.

Second Vice-President, A. G. Bosler, Chicago.

Treasurer, A. J. Markley, Belvidere.

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Wm. D. Chapman, *Chairman*.

#### ILLINOIS MEDICAL JOURNAL

Charles J. Whalen, *Editor*, Chicago.

Henry G. Ohls, *Managing Editor*, Chicago.

J. W. VanDerslice, *Secretary, Publication Committee*, Oak Park.



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## SECTION ON SURGERY

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J. S. Nagel, Chicago.

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## LADIES' ENTERTAINMENT COMMITTEE

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#### MEETING OF THE HOUSE OF DELEGATES

*Tuesday Evening, May 8, 1928*

Stevens Hotel

9:00—Meeting called to order by President G. Henry Mundt for reports of officers, committees and other business to come before the House.

*Friday Morning, May 11, 1928*

9:00—Meeting called to order by President G. Henry Mundt for election of officers, committees, delegates to American Medical Association meeting, reports and other business to come before the House

#### SECRETARIES' CONFERENCE

Stevens Hotel

*Tuesday, May 8, 1928*

J. W. Hamilton, *President*, Mt. Vernon.

W. J. Benner, *Secretary*, Anna.

I. L. Foulon, *Secretary*, East St. Louis.

10:00 A. M.—

1. "The Value of Medical Legislation"—John R. Neal, Chairman, Legislative Committee, Springfield.

2. "The Women's Auxiliary"—Mrs. G. Henry Mundt, President, Women's Auxiliary, Illinois State Medical Society, Chicago.

3. "Value of the Noon-Day Luncheon Meeting"—G. C. Otrich, Belleville.

#### GENERAL SESSIONS

*Tuesday Evening, May 8, 1928*

Ball Room, Stevens Hotel

7:30—Meeting called to order by the President, G. Henry Mundt, M. D.

Invocation—Rev. Duncan H. Browne, S. T. D., Rector, St. James Protestant Episcopal Church, Chicago.

Address of Welcome—Isaac A. Abt, M. D., President Chicago Medical Society.

Address of Welcome—Mr. T. C. Powell, President, Chicago and Eastern Illi-

nois Railroad, representing the Chicago Association of Commerce.

Report of Chairman, Committee on Arrangements, N. S. Davis III, M. D., Chicago.

Address—Olin West, M. D., Secretary, American Medical Association, "What Organized Medicine Is Trying to Do."

*Wednesday Evening, May 9, 1928*

6:00—President's Dinner—Grand Ball Room.

7:30—President's Address—G. Henry Mundt, President Illinois State Medical Society.

8:00—Oration in Surgery—"Carcinoma of the Larynx," (Illustrated by Motion Pictures)—R. C. Lynch, New Orleans, La.

*Thursday Afternoon, May 10, 1928*

5:00—Oration in Medicine—Chas. Hugh Neilson, St. Louis, Mo.

*Thursday Evening, May 10, 1928*

8:00—Symposium on Medical Economics. Consisting of a series of ten minute talks on important Economic questions of interest to the Medical Profession. (Definite announcement in the Official Printed Program).

*Friday Afternoon, May 11 1928*

1:30—Induction of the President-Elect, John E. Tuite, Rockford.

1:45—Report of the House of Delegates.

#### ENTERTAINMENT

An unusually attractive entertainment program has been arranged by the Committee, Mrs. Charles Spencer Williamson, *chairman*.

*Tuesday, May 8, 1928*

Registration.

7:30 P. M.—Opening meeting of Society, Ball Room, Stevens Hotel.

*Wednesday, May 9, 1928*

12:30 P. M.—Luncheon, Marshall Field & Co.

1:30 P. M.—Fashion Exhibit, Marshall Field & Company.

3:00-6:00 P. M.—Tea, The Fortnightly Club, 120 Bellevue Place.

6:00 P. M.—Annual President's Dinner, Ball Room, Stevens Hotel.



*Thursday, May 10, 1928*

- 11:00 A. M.—Business Meeting of the Women's Auxiliary, Illinois State Medical Society, North Ball Room, Stevens Hotel.
- 12:30 P. M.—Luncheon, Women's Auxiliary, North Ball Room, Stevens Hotel, followed by election of Officers.
- 4:00-7:00 P. M.—Reception, Ida Noyes Hall, University of Chicago, 1212 East 59th Street.

It is the desire of the committee to make the stay at the convention a happy one for the Ladies, and it is hoped that all will attend the various functions arranged. (This is a preliminary program—the complete program will appear in the official printed program of the Meeting.)

**THE PRESIDENT'S DINNER**

The Annual President's Dinner will be held in the Ball Room, Stevens Hotel, at 6:00 P. M., Wednesday Evening. The immediate past president, Mather Pfeifferberger of Alton, will preside at this function. An interesting program is being arranged and it is hoped that every member in attendance at the meeting will attend this dinner. Tickets can be procured at the Registration desks, or from the committee on President's Dinner in advance of the meeting.

**TO VISITING PHYSICIANS**

We welcome you at this 78th Annual Meeting of the Illinois State Medical Society. The meeting is planned so that it will be of especial interest to all physicians of the Middle West. Unusual Clinics have been arranged for the entire week of May 7 to May 12. The Scientific programs likewise have been carefully arranged in each of the Sections. The Scientific and the Commercial Exhibits are worthy of your time, and we hope you will look them over thoroughly. We hope that you will enjoy this meeting, and meet with us again in the future.

**SECTION PROGRAMS****SECTION ON MEDICINE**

J. L. Sherrick, *Chairman*.  
N. S. Davis, III, *Secretary*.

*Tuesday Afternoon, May 8, 1928*

- Scientific Program, North Ball Room, Stevens Hotel.
- 1:30—"Diphtheria Immunization Campaigns"—Elizabeth B. Ball, Springfield. Discussion opened by A. L. Hoyne, Chicago.
- 2:00—"Epilepsy"—Victor A. McClanahan, Aledo. Discussion opened by Peter Bassoe, Chicago.
- 2:30—"Indications for Blood Chemistry"—C. R. Smith, Decatur. Discussion opened by E. J. Stieglitz, Chicago.
- 3:00—"The Heart in Goiter Conditions"—Frank Deneen, Bloomington. Discussion opened by W. W. Hamburger, Chicago.
- 3:30—"Recent Studies in the Treatment of Arthritis"—Charles P. Emerson, Indianapolis, Indiana. (By invitation.) Discussion opened by L. H. Mayers, Chicago and D. E. Markson, Chicago.

4:30—"A Medical Martyr of the Eighteen Sixties"—C. B. Johnson, Champaign. Discussion opened by I. S. Cutter, Chicago.

5:00—"Movements of the Alimentary Tract in Experimental Animals, Motion Picture Demonstration"—A. J. Carlson and A. B. Luckhardt, University of Chicago, Department of Physiology.

*Wednesday Morning, May 9, 1928*

Clinical Meeting at Northwestern University Medical School, 303 East Chicago Avenue.

- Physiology Lecture Room, 541 Ward Building.
- 9:00—"The Physiology of the Gall Bladder"—A. C. Ivy, Nathan Smith Davis Professor of Physiology, E. Oldberg, G. Kloster, A. C. Leuth.
- 10:00—"Tropical(?) Sprue in Illinois"—W. H. Holmes.
- 10:30—"Light Therapy, Uses and Abuses"—W. T. Bovie and J. S. Coulter.
- 11:15—"Endocrine Disturbances in Childhood"—I. A. Abt.

Archibald Church Library, 1st Floor Ward Building.

9:00—"The Role of Bacteria in the Intestine"—A. I. Kendall.

9:45—"Symposium on Cardiac Failure, Illustrated with Cases"—J. G. Carr, and N. C. Gilbert.

10:45—"Symposium on Toxic Thyroid Dis-

ease"—C. A. Elliott, H. M. Richter, A. B. Kanavel and J. P. Simonds.

Chemistry Lecture Room, 641 Ward Building.

9:00—"Trigeminal Neuralgia"—L. E. Davis.

9:45—"Myostatic Contractures"—S. W. Ran-  
son.

10:30—"Vitamine 'B' Deficiencies"—C. J.  
Farmer.

11:15—"Post-Encephalitic Phenomena"—L.  
J. Pollock.

*Wednesday Afternoon, May 9, 1928*

Clinical Meeting, at the School of Medicine,  
University of Chicago.

Assembly Room, Pathology Building.

2:00—"Pernicious Anemia"—O. H. Robinson.

3:00—"Nephritis"—F. C. McLean.

4:00—"Diabetes Mellitus"—L. Leiter.

4:45—"Rheumatic Fever"—C. P. Miller.

Assembly Room, 137, Medical Clinic.

2:00—"Clinical Lectures and Demonstrations:  
Diseases of the Nervous System"—F. Hiller.

3:45—"Clinical Lectures and Demonstrations:  
Syphilis and Diseases of the Skin"—S. W.  
Becker.

Amphitheater (Surgical) 6th Floor, Albert  
Merritt Billings Hospital.

2:00—"Medical Conference, Toxic Goiter"—  
J. L. Miller, G. M. Curtis and others.

Amphitheater, Pathology Building.

4:00—"Clinical Pathological Conference"—  
H. G. Wells, F. C. McLean, and others.

Lecture Room, Physiology Building.

2:00—"Demonstrations by Members of the  
Department of Physiology"—A. J. Carlson, pre-  
siding.

3:45—"Demonstration by Members of the De-  
partment of Physiological Chemistry"—F. C.  
Koch, presiding.

*Thursday Morning, May 10, 1928*

Clinical Meeting at the Cook County Hospital.

Medical Amphitheater. F. Tice, *Chairman*.

8:30—"Agranulocytic Angina"—I. Trace.

8:50—"Diagnosis of Early Pulmonary Tu-  
berculosis"—M. Lewison.

9:10—"Diabetes"—R. Keeton.

9:30—"Encephalitis"—R. Grinker.

9:50—"Alkalosis"—S. Portis.

10:10—"Demonstrations of Fresh Pathological  
Material"—R. Lifvendahl.

10:30—"Treatment of Gastric Ulcer"—J.  
Meyer.

10:50—"Cryo-cautery"—E. Zeisler.

11:10—"Artificial Pneumothorax in Treat-  
ment of Tuberculosis"—S. Taub.

11:30—"Albuminuria and Nephritis in Chil-  
dren"—J. Calvin.

11:50—"Newborn Demonstration"—A. Par-  
malee.

Surgical Amphitheater. W. W. Hamburger,  
*Chairman*.

8:30—"X-Ray"—C. Mathews.

8:50—"Artificial Pneumothorax in Tubercu-  
losis"—M. Schupman.

9:10—"Ultra-violet Rays in Convalescence"—  
D. Kobak.

9:30—"Medicine"—L. Unger.

9:50—"Chronic Ulcerative Colitis"—A. A.  
Goldsmith.

10:10—"Dermatology"—E. A. Oliver.

10:30—"Newer Treatment of Neuro-Syphilis"  
—A. E. Yudelson.

10:50—"Allergic Diseases"—S. M. Feinberg.

11:10—"Diathermia in Arthritis"—L. Greis.

11:30—"Cranial Injury of the New Born"—  
A. Levinson.

11:50—"Obstetrical Movies"—D. Horner.

New Building Amphitheater. J. H. Hess,  
*Chairman*.

8:30—"Renal Function Tests"—I. F. Volini.

8:50—"Epidemic Meningitis"—A. L. Hoyne.

9:10—"Modern Conception and Early Recog-  
nition of Neuroses"—H. I. Davis.

9:30—"Diagnosis of Uterine Carcinoma"—F.  
Falls.

9:50—"Massive Doses of Cod Liver Oil in  
Infant Feeding"—H. E. Irish.

10:10—"Diagnosis of Foreign Bodies in the  
Chest"—G. Boot.

10:30—"Neurologic Cases"—J. Favill.

10:50—"Heart Disease in Childhood"—C.  
Stulik.

11:10—"Orthopedic Conditions"—C. A. Par-  
ker.



11:30—"Points of Interest in Oto-Laryngology"—S. Salinger.

11:50—"Neuromuscular Disturbances in Children"—M. Blatt.

*Thursday Afternoon, May 10, 1928*

Clinical Meeting at the Research and Educational Hospital, University of Illinois School of Medicine.

Clinic Number One.

1:30—"Toxemias of Pregnancy"—F. Falls.

2:30—"Medical Clinic, Metabolism"—R. Keeton.

Clinic Number Two.

1:30—"Neurological Clinic"—G. B. Hassin.

2:30—"Medical Clinic"—C. S. Williamson.

Clinic Number Three.

1:30—"Pediatric Clinic"—J. H. Hess.

2:30—"Dermatology Clinic"—F. Senear.

Clinical Demonstration to Small Groups.

1:30—Drs. Moore, Singer, Birch, Foley and Streicher.

*Friday Morning, May 11, 1928*

Scientific Program, North Ball Room, Stevens Hotel.

9:00—"Recognizing Tonsillar Infection"—F. M. Meixner, Peoria. Discussion opened by D. C. Sutton, Chicago.

9:30—"Achlorhydria, Types, Causes and Treatment"—F. G. Norbury, Jacksonville. Discussion opened by R. C. Brown, Chicago.

10:00—"Some of the Clinical Features of Mediastinal Tumors"—Fred M. Smith, Iowa City, Iowa. (By invitation.) Discussion opened by T. Ticken, and H. E. Potter, Chicago.

11:00—"Chairman's Address"—J. L. Sherrick, *Chairman*, Section on Medicine.

11:30—"Some Aspects of Chest Disease, and Their Diagnosis"—M. H. Winters, Galesburg. Discussion opened by E. A. Gray, and J. Brennemann, Chicago.

12:00—"Radium in Carcinoma of the Mouth"—W. A. Pusey, Chicago. Discussion opened by H. A. Potts, Chicago.

*Friday Afternoon, May 11, 1928*

Clinical Meeting with Section on Surgery at Loyola University Medical School, in the Clinical Amphitheater, Mercy Hospital.

2:00—"Goiter"—E. L. Moorehead, L. D. Moorehead and C. L. Mix.

2:40—"Proctology"—C. L. Martin.

3:00—"Gynecology and Radiology"—H. Schmitz.

3:20—"Gall Bladder Infections"—J. B. O'Donoghue.

3:40—"Tleus"—C. F. Sawyer.

4:00—"Duodenal Ulcer with Demonstration of Cases"—F. M. Drennan.

4:20—"Cardiac Irregularities by Electrocardiograph, Lantern Slide Demonstrations"—I. F. Volini.

4:40—"Differential Diagnosis of Chest Diseases"—R. S. Berghoff.

5:00—"Gall Bladder"—W. J. Pickett.

SECTION ON SURGERY

J. R. Harger, *Chairman*.

Earl D. Wise, *Secretary*.

Clinical Demonstrations will be given at the various Hospitals of Chicago, on Monday, May 7, 1928.

*Tuesday Afternoon, May 8, 1928*

Stevens Hotel.

1:00—"Treatment of Fractures"—T. A. Johnson, Rockford.

1:30—"Diagnosis and Treatment of Fractures of Cervical Spine. (Illustrated by Lantern Slides.)"—E. S. Murphy, Dixon. Discussion opened by Frank F. Hoffman, Chicago.

2:00—"Hemolytic Streptococcus Septicemia"—Edmund C. Ross, Decatur. Discussion opened by Charles H. Parkes, Chicago.

2:30—"The Deadly Upper Lip Infections"—H. J. Jurgens, Quincy. Discussion opened by R. C. Crain, Chicago.

3:00—"Surgical Abuse of Cesarean Section; Are We Not Giving It Too Wide Scope in View of the Mortality?"—Perry W. Toombs, Professor of Obstetrics, University of Tennessee, Memphis, Tenn. (By invitation.)

4:00—"Placenta Previa"—D. D. Smith, Decatur. Discussion opened by Gilbert FitzPatrick, Chicago.

4:30—"What I Learned on Sixty Cesarean Sections"—J. H. Bacon, Peoria. Discussion opened by LeRoy McLaughlin, Chicago.

*Wednesday Morning, May 9, 1928*

Stevens Hotel.

8:00—"The More Common Diseases of Anus

and Rectum and Their Surgical Treatment"—J. Franklin James, Peoria. Discussion opened by Charles J. Drueck, Chicago.

8:30—"Neuroblastoma in Infancy, with Report of a Case"—Albert E. McEvers, Rock Island. Discussion opened by Claude Weldy, Chicago.

9:00—"A Plea for More Radical Procedure in Thyroid Adenoma"—J. W. Dreyer, Aurora. Discussion opened by Hugh McKechnie, Chicago.

9:30—"Prostatectomy"—Wm. B. Peck, Freeport. Discussion opened by John S. Nagel, Chicago.

10:00—"Carcinoma of the Pancreas"—Clifford U. Collins, Peoria. Discussion opened by E. M. Brown, Chicago.

10:30—"A Rational Attitude Toward Plastic Surgery" (Illustrated)—Frederick B. Moorehead, Chicago.

11:00—"Carcinoma of the Colon"—Irvin Abell, Professor of Clinical Surgery, University of Louisville School of Medicine, Louisville, Kentucky. (By invitation.)

*Wednesday Afternoon, May 9, 1928*

Northwestern University Medical School, 303 East Chicago Avenue.

2:00—Room 541—"Demonstrations of Obstetrical Operations"—Joseph B. DeLee and D. A. Horner.

2:00—Room 641—"Some Phases of Gastric Surgery"—Karl A. Meyer.

2:30—Room 541—"Operation of Spinal Fusion for Tuberculous Spondylitis"—E. W. Ryerson.

2:30—Room 641—"Treatment of Empyema in Children"—Sumner L. Koch.

3:00—Room 541—"Some Phases of Gastro-Intestinal Surgery"—John A. Wolfer.

3:00—Room 641—"Results of Stabilization in Infantile Paralysis"—Beveridge Moore.

3:30—Room 541—"Treatment of Fractures of the Pelvis and Their Complications"—R. W. McNealy.

3:30—Room 641—"Treatment of Varicose Veins and Ulcers"—G. deTakats.

4:00—Room 541—"Surgery of Pituitary Tumors"—Loyal Davis.

4:00—Room 641—"Gastroenterostomy for Duodenal Ulcer"—J. R. Buchbinder.

4:30—Room 541—"Metastatic Infections"—Frederick Christopher.

4:30—Room 641—"Stabilizing Operation on the Hip"—Fremont R. Chandler.

5:00-6:00—Inspection of Medical School and Dispensary.

*Thursday Morning, May 10, 1928*

University of Illinois School of Medicine.  
Operative Clinics.

Operating Room I.

8:00-9:00—Surgery of the Kidney—Chas. M. McKenna.

9:00-10:00—Surgery of the Stomach and Duodenum—Carl Hedblom.

10:00-11:00—Phrenico-exeresis. Thorocoplasty for Pulmonary Tuberculosis—Carl Hedblom.

11:00-12:00—Triple Arthrodesis for Flail Ankle—H. B. Thomas.

Operating Room VI.

8:00-9:00—Surgery of the Biliary Tract—J. D. Koucky.

9:00-10:00—Exophthalmic Goiter—L. Seed.

10:00-11:00—Hernia—E. Andrews.

11:00-12:00—Cesarean Section—F. H. Falls.

Dry Clinics. Assembly Room.

8:00-9:00—Jaundice—E. Andrews.

9:00-10:00—Indications for Cesarean Section, Case Demonstrations—F. H. Falls.

10:00-11:00—Undescended Testicle and Nephropexy. Lantern Slide Demonstration—C. M. McKenna.

11:00-12:00—Surgical Treatment of Pulmonary Tuberculosis—Carl Hedblom.

*Thursday Afternoon, May 10, 1928*

Cook County Hospital.

Clinical Session.

1:00-3:00—Carcinoma of Breast—Frederick G. Dyas.

Perineal Prostatectomies—Frank Pfeiffer.

Osteomyelitis;—Treatment of Metastatic Arthritis;—Fractures of Knee Joint—Philip H. Kreuscher.

Hernia Operations—R. W. McNealy.

3:00-5:00—Gynecological Diagnostic Clinics—Channing W. Barrett.

Pathological Obstetrics—David Hillis.



Surgery of Gastric Ulcer—Karl Meyer.

Fractures About the Knee Joint—W. R. Cubbins.

*Friday Morning, May 11, 1928*

Clinical Program at University of Chicago.

*Friday Afternoon, May 11, 1928*

Joint meeting with Section on Medicine, by Faculty of Loyola University Medical School.

Amphitheater, Mercy Hospital.

Goiter—E. L. Moorehead, L. D. Moorehead and Chas. L. Mix.

Proctology—Clement L. Martin.

Gynecology and Radiology—Henry Schmitz.

Gall Bladder Infections—John B. O'Donoghue.

Ileus—Charles F. Sawyer.

Duodenal Ulcer with Demonstration of Cases—Fred M. Drennan.

Lantern Slide Demonstration—Cardiac Irregularities by Electrocardiograph—Italo F. Volini.

Differential Diagnosis of Chest Diseases—Robert S. Berghoff.

Gall Bladder—William J. Pickett.

Special management of Spinal Curvature—Philip H. Kreuscher.

Circulatory Disturbances of the Extremities—John D. Claridge.

SECTION ON EYE, EAR, NOSE AND THROAT

C. F. Yerger, *Chairman*.

Walter Stevenson, *Secretary*.

*Monday, May 7, 1928*

Hospital Clinics will be Conducted in the Morning and Afternoon, under the Auspices of the Chicago Ophthalmological and Chicago Oto-Laryngological Societies.

6:30 P. M.—Annual Banquet of Section in conjunction with Chicago Ophthalmological and Oto-Laryngological Societies, at the Stevens Hotel. Reservations should be made with Dr. C. F. Yerger, Chairman, 4458 West Madison Street, Chicago.

*Tuesday, May 8, 1928*

Hospital Clinics morning and afternoon under the auspices of the Chicago Ophthalmological and Chicago Oto-Laryngological Societies.

*Wednesday Morning, May 9, 1928*

Scientific Program. Stevens Hotel. 8:00-12:00.

Chairman's Address—C. F. Yerger, *Chairman*,

Section on Eye, Ear, Nose and Throat, Chicago.

"Can Diathermy Remove Cataract?"—F. L. Alloway, Champaign. Discussion opened by C. R. Fringer, Rockford.

"Cataracts; Pro-Operative and Post-Operative"—R. H. Woods, LaSalle. Discussion opened by J. H. Roth, Kankakee.

"Difficulties in Diagnosis of Tuberculosis of the Eye"—W. C. Finnoff, Denver, Colorado. (By invitation.)

"Acute Glaucoma"—M. Goldenburg, Chicago.

"Chronic Glaucoma"—W. E. Wilder, Chicago. Discussion opened by Harry Gradle, and Thomas Faith, Chicago.

"The Training of an Eye, Ear, Nose and Throat Specialist"—Leo Steiner, Chicago. Discussion opened by E. K. Findley, Chicago.

"Gastric Disorders of Asthenopic Origin"—J. E. Lebensohn, Chicago. Discussion opened by T. D. Allen, Chicago.

"Emphysema of the Eyelids"—W. E. Shastid, Pittsfield. Discussion opened by C. A. Hercules, Harvey.

*Wednesday Afternoon, May 9, 1928*

1:00-5:00 P. M.

"Vulnerable Areas In the Facial Nerve"—A. H. Andrews, Chicago. Discussion opened by A. A. Hayden, Chicago.

"The Disturbance of the Auditory and Vestibular Functions In Intracranial Lesions"—J. G. Wilson, Chicago. Discussion opened by Norval Pierce, and Geo. E. Shambaugh, Chicago.

"Radio-Lucent Foreign Bodies in Bronchoscopy and Esophagoscopy"—Edwin McGinnis, Chicago. Discussion opened by H. R. Watkins, Bloomington.

"Surgical Correction of Crooked Nose" (Lantern Demonstration)—S. Salinger, Chicago. Discussion opened by C. F. Burkhardt, Effingham.

"Surgical Diathermy"—J. C. Beck, Chicago. Discussion opened by G. W. Boot, Chicago.

"Ivory Implant in Atrophic Rhinitis"—L. Bernheimer, Chicago. Discussion opened by C. B. Welton, Peoria.

"The Occult Pathologic Antrum"—A. M. Corwin, Chicago. Discussion opened by Louis Ostrom, Rock Island.

"Rhinological Problem in Bronchial Asthma"—Burton Haseltine, Chicago. Discussion opened by D. W. Myers, Ann Arbor, Michigan.

"Reactions Resulting from Intra-Nasal Sur-

gery" (A Laboratory and Clinical Study)—A. R. Hollender and H. M. Cottle, Chicago. Discussion opened by Frank Novak, Jr., Chicago.

"Decortication of the Mastoid"—N. Schoolman, Chicago. Discussion opened by J. S. Clark, Freeport.

"Barbituric Hypnotics in the Treatment of Prophylaxis of Rhinologic Cocaine Intoxication"—M. Reese Guttman, Chicago. Discussion opened by J. C. Beck, Chicago.

*Thursday, May 10, 1928*

#### Clinical Sessions.

9:00-12:00—University of Chicago. Ophthalmology; "Clinical and Pathological Demonstrations," Billings Hospital, Eye, Ear, Nose and Throat Clinic—E. V. L. Brown and Staff.

Oto-Laryngology; "Clinical and Pathological Demonstrations," Billings Hospital, Eye, Ear, Nose and Throat Clinic—H. Fielding Williamson and Staff.

2:00-5:00—Rush Medical College. Ophthalmology.

2:00-3:00 P. M.—Robert Von der Heydt will demonstrate cases with the Slit Lamp and Gullstrand Ophthalmoscope.

3:00-4:00 P. M.—Wm. George Reeder will give his regular clinic with Special Cases.

4:00-5:00 P. M.—W. H. Wilder, a Clinic with Special Cases.

2:00-4:00—Oto-Laryngology.

1. Inspection of the Out-Patient Department in which the work has been organized to provide graduate training in the Specialty. Daniel B. Hayden and Richard W. Watkins, Second Floor, Senn Hall.

2. Demonstration of Patients. North Amphitheater, Sixth Floor, Senn Hall. 2:00-3:00 P. M.—George Torrison.

3. Demonstration of Bronchoscopy on Dogs. North Amphitheater, Sixth Floor, Senn Hall. 3:00-4:00 P. M.—Elmer Hagens.

*Friday, May 11, 1928*

#### Clinical Session.

Northwestern University Medical School.

9:00-11:00—Oto-Laryngology:

"Atrophic Rhinitis, with Demonstration of Cases"—Charles B. Younger.

"Otosclerosis" (Pathological Specimens)—J. Gordon Wilson.

"Maxillary Sinus Operations with New Instruments"—(With Cases)—S. B. Munns.

"New Plastic Surgery with the Radical Mastoid Operation" (With Cases)—Wm. Joyce.

"Bronchoscopy" (With Special Cases)—John F. Delph.

"Intra-Nasal Tear Sac Operation" (With Cases)—C. F. Bookwalter.

11:00-2:00—Ophthalmology:

1. Demonstration with the Gullstrand Slit Lamp and Corneal Microscope of Selected Cases of External Diseases of the Eye—Ralph Davis.

2. Demonstration with the large Gullstrand Binocular Ophthalmoscope of Selected Cases of Fundus Diseases—Wm. A. Mann, Jr.

3. Demonstration of Perimetry and Campimetry with the Ferec-Rand Perimeter and Other Instruments—E. Selinger.

4. Demonstration of Selected Histopathologic Preparations—C. H. Lockwood.

5. Demonstration of the Skiascope with Cylinders and Velonoskiaskopy—Thomas Keckich and Gail Soper.

6. Demonstration with the Troncoso Gonioscope of Normal and Pathological Conditions at the Chamber Angle—Wm. F. Moncreiff.

*Saturday, May 12, 1928*

University of Illinois School of Medicine.

9:00-11:00 — Ophthalmology: Demonstration of Methods: Post-Graduate Teaching of Ophthalmology—Dr. Hallard Beard and Staff.

11:00-4:00 — Oto-Laryngology: Clinic with Special Cases—Drs. Pierce, Lederer and Staff.

#### SECTION OF PUBLIC HEALTH AND HYGIENE

A. A. Crooks, *Chairman*.

E. W. Mosley, *Secretary*.

*Tuesday, May 8, 1928*

Stevens Hotel.

10:00—"The Pathology and Clinical Manifestations of Poliomyelitis"—J. J. McShane, State Department of Health, Springfield. Discussion opened by M. L. Blatt, Chicago.

10:30—"Organization and Maintenance of Whole Time County Health Unit"—W. H. Newcomb, Health Officer, Jacksonville. Discussion opened by J. B. Liston, Health Officer, Carlinville.

11:00—"The Tennessee Plan for Tuberculosis Control"—Eugene Lindsay Bishop, Health Offi-



cer, Nashville, Tennessee. Discussion opened by Robert H. Hayes, Chicago.

11:30—"Modern Tendency in Public Health Organization"—C. StClair Drake, Chicago. (By invitation.)

*Tuesday Afternoon, May 8, 1928*

1:00—"Pasteurized Milk and Sanitary Milk Control in Illinois"—Mr. Harry Ferguson, Chief Sanitary Engineer, State Department of Health, Springfield. Discussion opened by N. O. Gunderson, Health Officer, Rockford.

1:30—"Chemical and Bacteriological Phases of Sewage Disposal and Water Supply in the Sanitary District of Chicago and Neighboring Communities"—F. W. Mohlman, Chief Chemist, Chicago Sanitary District, Chicago. Discussion opened by John F. Norton, Department of Bacteriology, University of Chicago.

2:00—"Relations Which Should Exist Between the Medical Profession and Public Health Officers and Workers"—Samuel Wallace Welch, Montgomery, Alabama. Discussion opened by Olin West, Secretary American Medical Association, Chicago.

2:30—"Tularemia"—Tom Kirkwood, Lawrenceville. Discussion opened by Victor Brian, District Health Superintendent, St. Francisville.

3:00—"The Control of Interstate Water Supplies"—John Monger, Director of Health, Columbus, Ohio. Discussion opened by Isaac D. Rawlings, Director, Department of Public Health, State of Illinois, Springfield.

3:30—"Health Departments and Their Proper Relations to the Private Practitioners"—Arnold H. Kegel, Health Commissioner, Chicago. Discussion opened by James H. Hutton, Chicago.

4:00—"The Laboratory As An Aid to Public Health Work"—Alban L. Mann, Elgin. Discussion opened by George H. Haan, Aurora.

*Wednesday, May 9, 1928*

10:00—"Small City Health Problems"—W. F. Burres, Health Officer, Urbana. Discussion opened by Arlington Ailes, Health Officer, LaSalle.

10:30—"An Advisory Medical Board As An Adjunct to a Health Department of a Smaller City"—Frank S. Needham, Commissioner of Health, Oak Park. Discussion opened by J. W. VanDerslice, Oak Park.

11:00—"Applied Railway Sanitation"—S. C. Beach, Health Officer, Illinois Central Railway

System, Chicago. Discussion opened by S. C. Plummer, Chicago.

11:30—"Medical Leadership in School Medical Inspection and Health Service"—Wm. A. Howe, President, American Association of School Physicians, Albany, New York. (By invitation.)

SECTION ON RADIOLOGY

Harold Swanberg, *Chairman*.

E. G. C. Williams, *Secretary*.

*Tuesday Morning, May 8, 1928*

Radiological Clinics.

General X-Ray Clinic. 10:00-12:00—St. Bernard's Hospital—B. C. Cushway, Chicago.

General X-Ray Clinic. 10:00-12:00—St. Luke's Hospital—E. L. Jenkinson, Chicago.

*Tuesday Afternoon, May 8, 1928*

Stevens Hotel.

1:30-3:00—Symposium on Anatomical Variations Observed in the Symptomless Spine.

"The Anatomy and Physiology of the Normal Spine and Pelvis"—E. J. Carey, Milwaukee, Wis.

"Radiological Studies of the Anatomical Variations Observed in the Symptomless Spine"—B. C. Cushway, and R. J. Maier, Chicago.

"Significance of the Anatomical Variations of the Symptomless Spine from the Surgical and Industrial Standpoint"—Wm. H. Bohart, Chicago. Discussion opened by Charles A. Parker and Maximilian J. Hubeny, Chicago.

3:00—"Differential Diagnosis, Clinically, by X-Ray, at Operation and with Frozen Section of Various Types of Bone Cysts"—Joseph C. Bloodgood, Associate Professor of Clinical Surgery, Johns Hopkins University Medical School, Baltimore. (By invitation.) Discussion opened by Hollis E. Potter and E. L. Jenkinson, Chicago.

4:00-5:00—Bone Clinic—Joseph C. Bloodgood, Baltimore.

6:00—Informal Dinner for Radiologists. Private Dining Room No. 1, Stevens Hotel.

*Wednesday Morning, May 9, 1928*

Radiological Clinics.

9:00-10:30—"The Genito-Urinary Tract"—Cassie B. Rose, Head of Radiological Department, Rush Medical College, Chicago.

10:30-12:00—"Radiotherapy and Electrical Resection"—Benj. H. Orndoff, Head, Department of Roentgenology, Loyola University School of Medicine, Chicago.

*Wednesday Afternoon, May 9, 1928*

Stevens Hotel.

Radiation Therapy. 1:30-4:00 P. M.

"Treatment of Non-Malignant Skin Diseases"—H. W. Grote, Bloomington. Discussion opened by Henry Chapin, Jacksonville.

"Indications for Radiation Therapy in Benign Uterine Hemorrhages"—Henry Schmitz, Chicago. Discussion opened by W. C. Danforth, Evanston, and W. A. N. Dorland, Chicago.

"Radium Treatment of Toxic and Exophthalmic Goiter"—O. W. Allison, Danville. Discussion opened by Wm. L. Brown, Chicago.

"A New Radium Applicator for Carcinoma of Cervix"—Harold Swanberg, Quincy. Discussion opened by Henry Schmitz, Chicago.

4:00-5:30 P. M.

"Radiation Treatment of Malignant Disease with Special Deference to the Saturation Method"—George E. Pfahler, Professor of Radiology, Graduate School of Medicine, University of Pennsylvania, Philadelphia. (By invitation.) Discussion opened by E. G. C. Williams, Danville, and R. T. Pettit, Ottawa.

*Thursday Morning, May 10, 1928*

Stevens Hotel.

Radiological Clinics.

9:00-10:30—"The Thorax"—Adolph Hartung, Head of Department of Radiology, University of Illinois School of Medicine, Chicago.

10:30-12:00—"The Gastro-Intestinal Tract"—Edward S. Blaine, Associate Professor of Roentgenology, Northwestern University Medical School, Chicago.

*Thursday Afternoon, May 10, 1928*

Stevens Hotel.

Roentgen Diagnosis.

1:30-3:00 P. M.

"Artificial Pneumothorax with High Intra-Pleural Pressure in Patients with Pleural Adhesions"—R. W. Dunham, Ottawa. Discussion opened by I. S. Trostler, Chicago.

"Diagnosis of Diverticulum of Stomach.—Report of Cases"—P. B. Goodwin, Peoria. Discussion opened by F. J. Ronayne, Maywood.

"Reverse Movement in the Contents of the Duodenum and Probable Significance"—B. H. Orndoff, Chicago. Discussion opened by W. T. Bronson, Chicago.

3:00-5:30 P. M. Radiation Therapy.

"Colloidal Lead Used with X-Ray Therapy in the Treatment of Carcinoma"—R. T. Pettit, Ottawa. Discussion opened by Edwin Ernst, St. Louis, Mo.

"Preliminary Reports of Some of the Biological Effects of the Roentgen Ray"—C. S. Bucher, Champaign. Discussion opened by C. E. Cook, Chicago.

"Some Interesting Cases of Cancer and Tuberculosis Treated with X-Ray and Quartz Light"—Sam W. Latham, Eldorado. Discussion opened by John M. Alford, Galva.

## RULES GOVERNING PRESENTATION OF PAPERS

All papers read by members shall be limited to twenty minutes and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject. All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section, when read, and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and shall not appear in medical print before it has been published in the ILLINOIS MEDICAL JOURNAL.

A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of that regular Session, if time permits, or as an alternative at the end of the program.

All discussions shall be confined strictly to the subject in hand.

No paper shall appear in the printed transactions of the meeting unless read in full or in abstract. (From the by-laws of the Illinois State Medical Society.)

CLINICS TO BE HELD BEFORE AND IMMEDIATELY  
FOLLOWING THE MEETING OF THE ILLINOIS  
STATE MEDICAL SOCIETY

ST. JOSEPH'S HOSPITAL

*Monday, May 7, 1928*

9:00 A. M.—Franklin B. McCarty—Surgery of Stomach and Gall-bladder.

9:00 A. M.—Frank David—Rectal Surgery.

10:00 A. M.—Lawrence Hines—Cardiovascular Syphilis.



11:00 A. M.—Frederick Rohr—Obstetrical Clinic.

11:00 A. M.—E. W. Gardner—Ear, Nose and Throat Surgery.

*Tuesday, May 8, 1928*

9:00 A. M.—Hugh McKenna—Bone Surgery.

9:00 A. M.—C. J. DeBere—Demonstration Ulcerative Colitis.

9:00 A. M.—Austin A. Hayden—Ear, Nose and Throat Surgery.

10:00 A. M.—F. O. Frederickson—Gastro-Intestinal Diseases.

10:00 A. M.—L. Wade Martin—Toxemias of Pregnancy.

*Saturday, May 12, 1928*

9:00 A. M.—W. H. G. Logan—Oral Surgery.

9:00 A. M.—Oscar Ofner—General Surgery.

10:00 A. M.—Chas. M. McKenna—Urological Surgery.

10:00 A. M.—Wallace Grosvenor—Cervical Cesarean Section.

10:00 A. M.—Leland Schaeffer—Medical Cases.

#### MICHAEL REESE HOSPITAL

*Saturday, May 5, 1928*

9:00 A. M.—D. N. Eisendrath—Urological Clinic.

9:00 A. M.—Leon Block—Gastro-Intestinal Clinic.

*Monday, May 7, 1928*

10:00-12:00 A. M.—D. C. Straus—Clinic on Goiter.

*Tuesday, May 8, 1928*

9:00-12:00 A. M.—Clinics on Various Aspects of Cardiac Diseases.

Philip Rosenblum—Cardiac Diseases in Children.

W. S. Priest—Electrocardiograms.

Sidney Strauss—Some Aspects of Cardiac Diseases in Adults.

W. W. Hamburger—Cardiac Manifestations and Arteriosclerosis.

*Tuesday, May 8, 1928*

11:30-12:30 M.—Solomon Strouse—Clinical Demonstration of Phases of Metabolic Disturbances.

*Saturday, May 12, 1928*

9:00-12:00 A. M.—Harry Jackson—Operative and Dry Clinics on Osteomyelitis.

9:00-12:00 A. M.—Ralph B. Bettman—Opera-

tive and Dry Clinics on Chest Surgery with Special Reference to Phrenectomy and Thoracoplasty.

#### MERCY HOSPITAL

*Monday, May 7, 1928*

8:30-12:00 A. M.—Drs. Schmitz and Laibe—Gynecological Clinic.

9:00-12:00 A. M.—Philip H. Kreuscher—Bone and Joint Surgery.

10:30-11:30 A. M.—John Edward Kelley—Surgical Clinic.

9:30-10:30 A. M.—Berghoff and Gerroci—Differential Diagnosis of Chest Diseases.

10:00-12:00 A. M.—Drs. Drennan and Valdez—Gastro-Intestinal Clinic.

11:00-12:00 A. M.—John B. O'Donohue—Surgical Clinics.

10:00-12:00 A. M.—Michael McGuire—Surgical Clinic.

10:00-12:00 A. M.—Milton Mandel—Medical Clinic.

*Tuesday, May 8, 1928*

8:00-12:00 A. M.—Eye, Ear, Nose and Throat Clinic.

Drs. Jordan, Christoph and Hoffman.

Drs. Musgrave, O'Connor and Grim.

10:00-12:00 A. M.—Drs. Drennan and Valdez—Gastro-Intestinal Clinic.

10:00-12:00 A. M.—Drs. Moorhead and Pickett—Surgical Clinic.

11:00-12:00 A. M.—John B. O'Donohue—Surgical Clinics.

10:00-12:00 A. M.—Michael McGuire—Surgical Clinic.

10:00-12:00 A. M.—Milton Mandel—Medical Clinic.

*Monday, May 14, 1928*

8:30-12:00 A. M.—Schmitz and Laibs—Gynecological Clinic.

#### ST. BERNARD'S HOSPITAL

*Monday, May 7, 1928*

9:00-12:00 A. M.—Clinics will be held by Drs. J. P. Meyer, J. B. Haeberlin, L. B. Donkle, W. G. Epstein and E. A. Rach.

#### CHICAGO LYING-IN HOSPITAL

*Saturday, May 5 and Monday, May 7, 1928*

9:00-11:00 A. M.—Clinics by J. B. DeLee, E. L. Cornell, D. A. Horner, J. P. Greenhill, A. R. Lapham and J. R. Bloomfield.

## PRESBYTERIAN HOSPITAL

*Saturday, May 5 and 12, 1928*

9:00-11:00 A. M.—D. P. Abbott—Medical Clinic.

11:00 A. M.—1:00 P. M.—N. S. Heaney—Gynecological Clinic.

*Monday, May 7 and 14, 1928*

9:00-11:00 A. M.—W. E. Post—Medical Clinic.

9:00-11:00 A. M.—Peter Bassoe—Neurological Clinic.

9:00-11:00 A. M.—H. L. Kretschmer—Urological Clinic.

11:00 A. M.—1:00 P. M.—Arthur D. Bevan—Surgical Clinic.

3:00-4:00 P. M.—W. G. Reeder—Ophthalmological Clinic.

*Tuesday, May 8 and 15, 1928*

9:00-11:00 A. M.—C. G. Grulee—Pediatric Clinic.

11:00 A. M.—1:00 P. M.—Kellogg Speed—Surgical Clinic.

2:00-4:00 P. M.—Ernest L. McEwen—Skin Clinic.

## ST. LUKE'S HOSPITAL

*Tuesday, May 8, 1928*

9:00-11:00 A. M.—George W. Hall—Neurologic Clinic.

*Saturday, May 12, 1928*

8:00-12:00 A. M.—Drs. L. L. and S. W. McArthur—Surgical Clinic.

*Monday, May 14, 1928*

10:00-12:00 A. M.—Harry Mock—Surgical Clinic.

*Tuesday, May 15, 1928*

1:30-4:00 P. M.—H. B. Thomas—Orthopedic Clinic.

## NORTH CHICAGO HOSPITAL

*Monday, May 7, 1928*

9:00-12:00 A. M.—Emil Beck—Surgical Clinic.

9:00-12:00 A. M.—Joseph Beck and Harry L. Pollock—Otolaryngological Clinic.

*Tuesday, May 8, 1928*

9:00-12:00 A. M.—Emil Beck—Surgical Clinic.

## ILLINOIS CENTRAL HOSPITAL

*Monday, May 7, 1928*

9:00-12:00 A. M.—Clinics by members of the Staff.

## U. S. VETERANS HOSPITAL, MAYWOOD, ILLINOIS

*Monday, May 7, 1928*

9:00-12:00 A. M. and 2:00-4:00 P. M.—Clinics and demonstrations by members of Staff.

## SHRINERS HOSPITAL FOR CRIPPLED CHILDREN

*Monday, May 7, 1928*

Clinics and demonstrations by Dr. Beveridge Moore and members of the Staff.

## AUGUSTANA HOSPITAL

*Saturday, May 5, 1928*

7:00 A. M.—1:00 P. M.—N. M. Percy and O. E. Nadeau—Surgical Clinic.

*Monday, May 7, 1928*

9:00-11:00 A. M.—F. H. Falls—Obstetrical Clinic.

1. Demonstration of thyrotoxicosis and pregnancy.

2. Obstetrical stethoscope.

3. Intrauterine diagnosis of monstrosities.

8:00-11:00 A. M.—Carl A. Hedblom—Chest Surgery.

8:00-11:00 A. M.—John Nuzum—Surgical Clinic.

11:00-12:00 A. M.—David S. Beilin—X-Ray diagnosis of biliary tract diseases.

*Tuesday, May 8, 1928*

7:00 A. M.—1:00 P. M.—N. M. Percy and D. W. Crile—Surgical Clinic.

11:00-12:00 A. M.—David S. Beilin—X-Ray diagnosis of biliary tract disease.

*Saturday, May 12, 1928*

7:00 A. M.—1:00 P. M.—N. M. Percy and O. E. Nadeau—Surgical Clinic.

## WESLEY MEMORIAL HOSPITAL

*Monday, May 7, 1928*

9:00-12:00 A. M.—Allen B. Kanavel—Surgical Clinic.

1. Thyroidectomy.

2. Gall-bladder operation.

3. Dupuytren's contraction.

4. Plastic on hand.

9:00-12:00 A. M.—T. P. O'Connor—Otolaryngological Clinic.

J. F. Delph—Bronchoscopy and lipiodol injection.

O. H. Maclay—Ethmoid infection.

W. M. Joyce—Sphenoid infection.

C. B. Younger—Antrum infection.



2:00-4:00 P. M.—Payson Nusbaum—Gynecological Clinic.

1. Hysterectomy for fibroid.
2. Hysterectomy for chronic infection.
3. Salpingectomy.

*Tuesday, May 8, 1928*

9:00-12:00 A. M.—Charles A. Elliott—Medical Clinic.

1. Goiter heart.
2. Pernicious anemia.
3. Discussion of general medical cases.

9:00-12:00 A. M.—Loyal Davis—Neurological Surgery.

1. Trifacial neuralgia.
2. Cerebellar tumor.

#### CLINICS FOR ILLINOIS STATE MEDICAL SOCIETY UNIVERSITY HOSPITAL

*Monday, May 7, 1928*

8:00-9:00 A. M.—Roentgenology—Dr. George M. Landau.

9:00-10:00 A. M.—Cholecystography—Dr. Bernard Fantus.

10:00-11:00 A. M.—Surgery—Dr. Marshall Davison.

11:00-12:00 A. M.—Pediatrics—Dr. H. E. Irish.

2:00-3:00 P. M.—Orthopedic Surgery—Dr. Arthur H. Conley.

3:00-4:00 P. M.—Ear, Nose and Throat—Dr. Benj. F. Andrews.

4:00-5:00 P. M.—Obstetrics—Dr. William Harcourt Browne.

*Tuesday, May 8, 1928*

8:00-9:00 A. M.—Clinical Pathology—Dr. Harry A. Singer.

9:00-10:00 A. M.—Obstetrics—Dr. Otto H. Rohrlack & Edgar T. Blair.

10:00-11:00 A. M.—Medicine—Dr. Howard Louis Heintz.

11:00-12:00 A. M.—Surgery—Dr. Charles Davison.

#### SCIENTIFIC EXHIBITS

##### UNIVERSITY OF ILLINOIS MEDICAL SCHOOL

Dr. Edward A. Boyden—Models, charts, x-rays showing the reaction of the human gall bladder to substances injected into the duodenum.

Dr. Adolph Hartung—Roentgen studies of in-

trathoracic lesions. Bronchiectasis as shown by flat film and after lipiodol injection.

Tubercular cases selected for surgery with after results.

Progressive changes with neoplastic lesions.

Dr. G. B. Hassin—Microscopic lantern slides in colors illustrating degenerative changes and inflammatory conditions in the central nervous system.

Dr. R. H. Jaffe—Mounted pathologic specimens, microphotographs and lantern slides.

Dr. Otto Kampmeier—Photographs (1) Development of lymphatic valves; (2) Figure of lymph drainage in lung; (3) Parthenogenesis in the mammalian ovary; (4) Specimens in jars—(a) Full term fetus in utero; (b) Siren monster. (5) Wax model of mammary gland in male.

Exhibits have been promised by Dr. Edmund Andrews, Dr. W. H. Welker, and Dr. Carl A. Hedblom.

##### NORTHWESTERN UNIVERSITY MEDICAL SCHOOL

Dr. F. D. Barker—Exhibit of animal parasites.

Dr. James G. Carr—Electrocardiograms.

Dr. C. J. Farmer—Charts relating to metabolism and vitamins.

Dr. A. C. Ivy—Charts and tracings concerning the newly discovered cholecystokinins.

Dr. J. P. Simonds—Mounted pathological specimens.

Dr. Loyal Davis, Dr. L. B. Arey and others have promised exhibits.

##### UNIVERSITY OF CHICAGO

Exhibits have been promised by Dr. Esmond R. Long and others but have not yet been definitely announced.

##### LOYOLA UNIVERSITY MEDICAL SCHOOL

Dr. P. H. Kreuscher—Original drawings, charts, X-ray films and descriptive material relative to operations on bones and joints.

Dr. Henry Schmitz—"A Clinical Study of Carcinoma of Cervix," by Henry Schmitz.

"Urological Studies"—by Joseph F. E. Leube.

"Heptero-salpingography in treatment of Sterility Due to Closed Uterine Tubes"—by Henry Schmitz.

##### DEPARTMENT OF HEALTH, CITY OF CHICAGO

Dr. Arnold H. Kegel—Charts, diagrams, photographs, 3x6 ft. model of new contagious Hospital, etc.

## ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Dr. Isaac D. Rawlings—PUBLIC HEALTH—one booth on laboratory; two on sanitation; one on dentistry. The dental exhibit to be available for May 10th and 11th only.

## AMERICAN MEDICAL ASSOCIATION

Dr. Arthur J. Cramp—Exhibits from the Bureau of Investigation, the Council on Pharmacy and Chemistry, the Council on Medical Education and Hospitals and the Bureau of Health and Public Instruction will be furnished.

Dr. Robert Von der Heydt—Photographs of Fundus Diseases of the Eye.

Dr. E. P. Sloan—Specimens of Goiter; Photographs, Pictures, Charts; Pictures—New Upper abdominal incision.

Dr. Robert H. Hayes—Pathological demonstration of the various conditions that occur in tuberculosis; mounted specimens; bacteriological exhibit showing the newer work done in tuberculosis, as demonstrated on culture media, slides, etc.

## AMERICAN COLLEGE OF SURGEONS

Dr. Bowman C. Crowell—Registry of bone sarcoma.

## QUINCY X-RAY AND RADIUM LABORATORIES

Dr. Harold Swanberg—New applicator for radium treatment of carcinoma of cervix.

## PRESBYTERIAN HOSPITAL OF CHICAGO

Dr. C. W. Apfelbach—Apparatus for measuring systolic blood pressure on a mercury manometer through a needle introduced into the femoral artery.

## EDUCATIONAL COMMITTEE

Illinois State Medical Society—Exhibit showing the work carried on through its efforts, posters, etc.

Exhibits are expected from William G. Hibbs of the Children's Memorial Hospital, Chicago, and from Dr. Hugo G. Fisher, Secretary of the Chicago Dental Society.

## WOMAN'S AUXILIARY

## ILLINOIS STATE MEDICAL SOCIETY

Mrs. G. Henry Mundt, *President*.

Mrs. Jas. H. Hutton, *Corresponding Secretary*.

*Thursday, May 10, 1928*

Stevens Hotel.

11:00 A. M.—Address—Mrs. John O. McReynolds, Dallas, Texas, President, Woman's Auxiliary, American Medical Association.

Business Meeting.

12:30 P. M.—Luncheon.

Address—Dr. William Allen Pusey.

Address—Dr. Harold M. Camp.

## ANNUAL MEETING OF TUBERCULOSIS SOCIETIES

## JOINT MEETING OF ILLINOIS TRUDEAU SOCIETY

Robt. H. Hayes, President

Walter C. Martini, Sec'y

and

## CHICAGO TUBERCULOSIS SOCIETY

W. H. Watterson, Pres.

S. A. Levinson, Sec'y

*Monday, May 7, 1928 at 9:00 A. M., the day preceding annual meeting Illinois State Medical Society.*

Through the courtesy of Dr. Benjamin Goldberg, Secretary of the Board of Directors of the Municipal Tuberculosis Sanitarium of Chicago, the Sanitarium will entertain as guests the Illinois Trudeau Society and the Chicago Tuberculosis Society.

The following clinics by members of the staff will be held at the Sanitarium:

Thoracic Surgery, by Dr. Carl Hedblom.

Genito-Urinary Tuberculosis with Demonstration of Pathology, by Dr. Charles Morgan McKenna.

New Methods in Sanitarium Control and Treatment of Tuberculosis Individuals, by Dr. Benjamin Goldberg.

Newer Concepts of the Bacteriology and Pathology of Pulmonary Tuberculosis, by Drs. Henry C. Sweaney and Samuel A. Levinson.

All physicians interested in tuberculosis are cordially invited to attend this meeting.

Dr. Joseph C. Bloodgood, of Baltimore, will conduct a bone clinic in the Section of Radiology, on Tuesday afternoon, at 4:00 o'clock. Physicians are invited to bring patients presenting various phases of bone pathology, especially tumors. A short history of the case together with the necessary Roentgenograms must be available. Roentgenograms accompanied by case



histories will also be discussed without patients being present. If you desire to present something for Dr. Bloodgood's clinic, please get in touch with the Secretary of the Section at once. Address, Dr. E. G. C. Williams, Secretary, Section on Radiology, Danville, Illinois.

The clinic will be conducted along similar lines as those held at New Orleans last December, in connection with the meeting of the Radiological Society of North America.

An informal dinner of radiologists and their friends will be held at 6:00 P. M. Tuesday evening, May 8th, in private dining room, No. 1, at the Stevens Hotel. Tickets for the dinner can be procured either at the registration desks, or from the officers of the section.

Interesting radiological exhibits will be shown in connection with scientific exhibits in the Exhibition Hall.

The Section on Eye, Ear, Nose and Throat has arranged a schedule of Clinics and Scientific Sessions lasting the entire week of May 7 to 12. The Chicago Oto-Laryngological and Ophthalmological Societies are cooperating with the Section in making the clinical arrangements. The program as outlined should appeal to every practitioner of this specialty not only in Illinois, but in the adjoining states, and we believe it is one of the biggest meetings of the kind ever arranged. The Chicago Medical Colleges and Societies are giving an opportunity to visiting members of the Eye, Ear, Nose and Throat fraternity that is well worth the time of them all to spend a full week in Chicago. The Annual Banquet of the Section in conjunction with the Chicago Oto-Laryngological and Chicago Ophthalmological Societies will be held at the Stevens Hotel at 6:30. All physicians desiring to attend the banquet should get in touch with the Chairman of the Section at once. Address Dr. C. F. Yerger, 4458 West Madison Street, Chicago.

## ILLINOIS MEDICAL LABORATORY ASSOCIATION

Annual Meeting, Stevens Hotel,

*Tuesday, May 8, 1928*

12:00 Noon—Luncheon; Stevens Hotel (Room to be announced). Followed by Business Meeting and election of officers.

### Scientific Program.

2:00 P. M.—

1. Interpretation of Blood Chemistry—F. C. Koch, Ph. D., University of Chicago.
2. Factors Influencing Oral Administration of Typhoid Vaccine—Lloyd Arnold, M. D., University of Illinois Medical School, Chicago.
3. Amebiasis—Boyman C. Crowell, M. D., Northwestern University Medical School, Chicago.
4. Undulant Fever—Thomas G. Hull, Ph. D., Illinois State Department of Public Health, Springfield.

## THE COMMERCIAL EXHIBITS

For the 1928 session of the Illinois State Medical Society at the Stevens Hotel the commercial exhibits are going to be of great importance. Probably no state society meeting has ever had as extensive a showing. More than three times as much space has been taken for this meeting as we have ever had before; many of the exhibitors are with us for the first time. All of the exhibitors are strictly reliable and of the highest ethical standing. Everything in the way of medical and surgical equipment will be shown at this meeting. We hope that every member and guest will give plenty of time to these commercial exhibits. Members should look over their offices before going to the meeting to see what they need and order it at the meeting as we must show this extensive group of exhibitors that we appreciate their support.

### COMMERCIAL EXHIBITORS

Names and addresses of the exhibitors at the 78th annual meeting of the Illinois State Medical Society to be held in Chicago, May 8 to 11, 1928:

Abbott Laboratories, North Chicago, Illinois.

Acme-International X-Ray Company, 711 West Lake Street, Chicago, Illinois.

American Optical Company, 10 South Wabash Ave., Chicago, Illinois.

Frank S. Betz Company, Hammond, Indiana.

George W. Brady and Company, 809-811 South Western Ave., Chicago, Illinois.

Britesun, Inc., 1115-17 North Franklin Street, Chicago, Illinois.

Burdick Corporation, 721 North Michigan Ave., Chicago, Illinois.

Cameron's Surgical Specialty Company, 666 West Division Street, Chicago, Illinois.

S. H. Camp and Company, Jackson, Michigan.

Chemists Supply Company, 174 North Wabash Ave., Chicago, Illinois.

Chicago Dietetic Supply House, 1750 West Van Buren Street, Chicago, Illinois.

Childs Drug Company, 223 West Erie Street, Chicago, Illinois.

Chippewa Spring Water Company, 1318 South Canal Street, Chicago, Illinois.

Ciba Company, Inc., Cedar and Washington Streets, New York City, New York.

The Cilkoid Company, Marshalltown, Iowa.

Cutter Laboratory, 440 South Dearborn Street, Chicago, Illinois.

DePuy Manufacturing Company, Warsaw, Indiana.

Deshell Laboratories, Inc., 536 Lake Shore Drive, Chicago, Illinois.

The DeVilbiss Company, Toledo, Ohio.

A. Diadul and Sons, 1562 Milwaukee Ave., Chicago, Illinois.

Dow Optical Company, 30 North Michigan Ave., Chicago, Illinois.

Ellis Manufacturing Company, 400 North Michigan Blvd., Chicago, Illinois.

The Engeln Electric Company, Inc., 329 South Wood St., Chicago, Illinois.

Evaporated Milk Association, 231 South La Salle Street, Chicago, Illinois.

The Fair Store, State, Adams and Dearborn Sts., Chicago, Illinois.

H. G. Fischer and Company, Inc., 2323-2337 Wabansia Ave., Chicago, Illinois.

Hanovia Chemical and Manufacturing Company, Newark, N. J.

The Heidbrink Company, 2633 Fourth Ave., South, Minneapolis, Minn.

The Holtex Company, 64 West Randolph Street, Chicago, Illinois.

Horlicks Malted Milk Corporation, 20 West Jackson Blvd., Chicago or Racine, Wisconsin.

Huston Brothers Company, 30 East Randolph Street, Chicago, Illinois.

Kellogg Company, Battle Creek, Michigan.

The Kelley Koett Manufacturing Company, Inc., Pure Oil Bldg., Chicago, Illinois.

The Laboratory Products Company, Cleveland, Ohio.  
McIntosh Electrical Corporation, 223 North California Ave., Chicago, Illinois.

Mandel Brothers, State Street, Chicago, Illinois.

Manhattan Coat Factory, 3223 North Halsted Street, Chicago, Illinois.

Mead Johnson and Company, Evansville, Indiana.

Medical Protective Company, 35 East Wacker Drive, Chicago, Illinois.

Mellins Food Company, 177 State Street, Boston, Mass.

Merrell-Soule Company, Syracuse, New York.

E. B. Meyrowitz Surgical Instruments Co., Inc., 520 Fifth Ave., New York City, New York.

Middlewest Instrument Company, 1870 South Ogden Ave., Chicago, Illinois.

Moores and Ross, Inc., Columbus, Ohio.

V. Mueller and Company, 408 South Honore Street, Chicago, Illinois.

National Dairy Council, 910 South Michigan Ave., Chicago, Illinois.

The E. L. Patch Company, Stoneham Post Office, Boston, Mass.

F. H. Paxton and Sons, 451 East Ohio Street, Chicago, Illinois.

The Chas. H. Phillips Chemical Company, 117 Hudson Street, New York City, New York.

Physicians' Supply and Drug Company, 427 South Honore Street, Chicago, Illinois.

The Pollen Filter Company, Inc., 618 Hickox Bldg., Cleveland, Ohio.

Riggs Optical Company, 5 South Wabash Ave., Chicago, Illinois.

Sanborn Company, 26 Lansdown Street, Cambridge, Mass.

Sargent's Drug Store, 23 North Wabash Ave., Chicago, Illinois.

W. B. Saunders Company, West Washington Square, Philadelphia, Pa.

Scanlan Morris Company, 58 East Washington Street, Chicago, Illinois.

G. D. Searle and Company, Inc., 4737 Ravenswood Ave., Chicago, Illinois.

G. H. Sherman, M. D., 14600-622 Jefferson Ave., East, Detroit, Michigan.

J. R. Siebrandt Mfg. Company, Inc., 3239-3241 Troost Ave., Kansas City, Mo.

Spencer Lens Company, 5 South Wabash Ave., Chicago, Illinois.

The Spirella Corset Company, Niagara Falls, New York.

E. R. Squibb and Sons, 80 Beekman Street, New York City, New York.

Standard X-Ray Company, 1932 North Burling Street, Chicago, Illinois.

Swan-Myers Company, Indianapolis, Indiana.

Uhlmann Optical Company, 55 East Washington Street, Chicago, Illinois.

Victor X-Ray Corporation, Jackson Blvd. and Robey Street, Chicago, Illinois.

The Wilson Laboratories, 4221-23-25 South Western Blvd., Chicago, Illinois.

Zimmer Manufacturing Company, Warsaw, Indiana.

#### NOTES ON EXHIBITS

Acme-International X-Ray Company, 711 West Lake Street, Chicago, will display some of their staple and latest units of Precision X-Ray and Physical Therapy Apparatus including such as the Precision Coronaless Six-Sixty Plus and Super-High-Speed 150 K. V. Generators, 100 Point Autotransformer Control, and their Model IV and Portable Diathermy Generators. They also expect to include an interesting exhibit of radiographs.

The American Optical Company occupying space number 4 will have a very interesting display of optical equipment and instruments. Of particular interest will be the demonstration of their new No. 588-Wellsworth-DeZeng Phoropter, and also the latest Wellsworth DeZeng Diagnostic Instrument. They will also exhibit a complete line of instruments for the Eye, Ear, Nose and Throat specialists, among which will be found the newer designs and models. Competent representatives will be in attendance to show and explain their instruments, and give any information that may be desired in their line.

Frank S. Betz Company of Hammond, Indiana, will display a line of their Betzco Whitekraft furniture, Betzco Trutest in-



struments, a special display of Fleischer's Stethoscope supplied with the Fox localizing disk, a special display of their Hand Arc Light. In addition to these articles, they will display many new instruments, appliances, etc., for all types of practitioners.

Britesun, Inc., 1113-19 North Franklin Street, Chicago, will exhibit a complete line of Therapeutic lamps which includes the improved Britesun Single Arc Lamp, Britesun Twinarc Lamp, Britesun Specialist Carbon Arc Lamp, Britesun Major Radiant and Infra-Red Lamp, and Britesun Stand and Clamp Infra-Red Lamps. New literature on Carbon Arc Therapy has been compiled, and will be distributed from their Booth.

The Burdick Corporation, 664 N. Michigan Ave., Chicago, will display the Burdick Bedside Unit, a portable mercury arc lamp, delivering a high intensity of the longer, regenerative ultra-violet wave lengths. The Zoalit (three models) the most effective of infra-red generators, for the application of penetrating heat. The combination Air and Water-Cooled Mercury Arc Lamps. The Burdick Home Trainer, a mechanical exerciser for deep and rhythmic massage.

Cameron's Surgical Specialty Company will display Cameron's Electro-Diagnoset which provides Transillumination, Direct Illumination, Accurate Diagnosis, Simplified Technique and Improved Instrumentation for all phases of minor and major diagnostic, operative and therapeutic procedure. The outfit contains surgical lamps, speculae and endoscopes for use in all of the natural orifices of the body, as well as in surgical incisions—the equipment is out of your way, completely sterilizable, safe, always working and operates from either battery or city current. The equipment will be demonstrated daily from May 8th to 11th, by trained Diagnostic Clinicians.

The Exhibit of the S. H. Camp Company, of Jackson, Michigan, will consist of a scientific demonstration by experts of the Camp line of maternity, Convalescing, Post-operative, Ptosis, Abdominal Supports, Sacro-Iliac Binders and Orthopedic Braces.

The Chicago Dietetic Supply House will have on display its complete line of foods, diet scales and equipment which are sold to patients requiring special management for diabetic conditions. A competent representative will be in charge to give full information concerning the various products.

Ciba Company, Inc., sole agents in the United States for the Society of Chemical Industry in Basle, Switzerland, will exhibit their well known pharmaceutical specialties at the meeting. The leading preparations are Digifoline "Ciba," Cibalgine "Ciba," Coagulen-Ciba, Coramine "Ciba," Dial "Ciba," Lipiodine "Ciba," Agomensin "Ciba," and Sistomensin "Ciba." Their high reputation is based on the painstaking research work done in the pharmacological laboratories of the Swiss Company at Basle.

The new "M. D. Special" package of CILKLOID will be featured in the exhibit of the Cilkloid Company of Marshalltown, Iowa. This is a combination package containing both Perforated and Impervious Forms of the dressing that is prepared for the convenience of doctors who desire to have a small quantity of both forms on hand for office use. The exhibit will show the regular Impervious Form of the product that is used for occlusive coverings; the Double weight Impervious Form used for Non-adherent drains; and the Perforated Form used as non-adherent dressing for Grulating wounds. The President of the Company will conduct the exhibit and will be glad to discuss the uses and advantages of the dressing with all who care to visit their booth.

The Cutter Laboratory of Berkeley, California, through their Chicago representatives will show their Hay Fever Pollen Extracts, and Test Sets, Toxivi Syringes, Tetanus Antitoxin, and their Mixed Vaccine for Respiratory Infections. Representatives of the Company will be present to give the desired information relative to their products, methods of manufacture and other information that may be desired.

The Deshell Laboratories will exhibit their well known product, "Petrolagar," in booth No. 88. They have a very valuable set of drawings by the well known artist, Tom Jones, illustrating various types of constipation, and bowel conditions which will be given free, or mailed to physicians who request them. These drawings are of value in comparing X-Ray films, and different from the usual anatomical drawings in that they

show the perspective. Many gastro-enterologists are using Petrolagar as an enema, either as a useful vehicle for the medication of the lower bowel, or diluted with water and used as a non-irritating cleanser. Samples will be available for physicians, or a generous quantity will be mailed to your hospital charges prepaid.

The DeVilbiss Company of Toledo, Ohio, will display their complete line of Medical Atomizers, Nebulizers, Steam Vaporizers and Powder Blowers for Physicians' and Patients' use. Representatives of the Company will be glad to furnish any desired information on their extensive line.

The Dow Optical Company, 30 North Michigan Blvd., Chicago, will show a complete line of modern ophthalmological equipment and a complete line of samples of all up to date styles in spectacle wear.

The Ellis Manufacturing Company, 400 North Michigan Avenue, Chicago, will exhibit a display of the well known model "A" Ellis Carbon Arc Lamp for the production of Ultra-Violet Radiation, and artificial sunlight. This is a massive lamp for office and institutional work and is distinctive in that it embodies an electro-magnetic automatic feed mechanism which feeds large, long burning 12 inch carbons with precision, and which mechanism has proved reliable in many lamps over a period of five years. The arc is of high arc voltage and current intensity, being designed to take advantage of the maximum radiation of Ultra-Violet per ampere which is obtainable from arc voltages which are critically high. The lamp has all of the possible refinements, and on account of the increased production, the price of this Model "A" lamp has been materially reduced so that it will appeal to those who wish a superior quality.

The Engeln Electric Company, 329 South Wood Street, Chicago, will exhibit an entirely new line of X-Ray equipment as well as many new Physio-therapy articles. They will be pleased to demonstrate these appliances to all physicians who will call at their Booth.

The exhibit of the Evaporated Milk Association is unique, and unusually interesting. An experiment indigestion, showing why Evaporated Milk is highly digestible; an exhibit of delicious food containing milk and which make it easy to include milk in a diet for those who do not ordinarily like milk; an exhibit of low and medium cost diets showing the caloric value, in which Evaporated Milk is used. Costs will be made on the "per man per day" and "family of six" scale. Bulletins and reprints of interest to physicians will be distributed from the Booth.

George W. Brady and Company, of Chicago, will exhibit their well known Potter Bucky Diaphragms in the curved and flat styles, the Granger Mastoid Localizer and Sinus Masks, and a complete X-Ray equipment designed especially for the smaller offices or hospitals, and selling at a low price. A wide line of X-Ray accessories will be shown in Booth No. 55.

The Fair Store, Chicago, will exhibit Physicians' office coats and blouses, Surgeons' operating gowns, nurses' and office assistants' uniforms, Carbon Arc Lamps and a complete line of Physio-therapy equipment from their Surgical Department.

H. G. Fischer & Co., Inc., will exhibit in Booth No. 10 some entirely new developments in the field of physical therapy. These pieces of apparatus as well as certain new accessories, are the result of many years of close adherence to the idea of producing only such material for the physicians as has been entirely approved and found usable in every sense of the word. Their new 1928 model Low Voltage and Wave Current Generator is of marvelous simplicity and yet making available all of the fifteen low voltage currents. A new Diathermy Apparatus in Cabinet form and a new Portable type will be shown. Thoroughly informed representatives will be present to show the various models to all who call at their Booth.

The Heidbrink Company will exhibit their most recent models of gas apparatus designed for the administration of nitrous oxide, oxygen, ethylene and carbon dioxide. Of particular interest will be the remarkable record of these machines for safety with ethylene. Every precaution has been taken to make these machines adaptable to this gas. A very efficient portable outfit will be an interesting feature of the exhibit. Although prac-

tically equivalent to the larger unit, this machine is built so compactly that it fits into a small carrying case, the total weight with the case not exceeding twenty-nine pounds.

The Holtex Company will exhibit a line of sanitary and comfortable Suspensories, and Supporters,—the kind that the physician can recommend to his patients. They are made in three sizes, medium, large, and extra-large. It is the desire of the Company to thoroughly cooperate with the Medical Profession, and representatives of the Company will appreciate the opportunity of showing these supporters, and giving any information desired, to those calling at Booth number 87.

Horlicks Malted Milk Corporation will greet their old friends and new ones in Booth No. 46. They are planning unusual activities in the interests of their products, Horlicks, the Original Malted Milk, Horlicks Chocolate Malted Milk, Horlicks Milk Modifier, and Horlicks Malted Milk Lunch Tablets, both natural and chocolate flavor. Representatives of the Horlick firm will be present to explain the uses of these products which have an application to many of the dietary problems of the medical profession. Horlicks Milk Modifier, a maltose dextrin sugar, has attracted an unusual amount of interest, as have other of their products which will be exhibited at the meeting.

The exhibit of Huston Brothers Company, Chicago, will consist of a large, full line of latest patterns rustless and stainless surgical instruments, including scissors, forceps of all patterns—also a splendid line of rustless surgical needles and rustless hypo needles. They will exhibit also Electro-surgical apparatus, including new models of Therapeutic and Infra-Red lamps. Many other interesting articles will likewise be shown in the exhibit.

Physicians interested in the use of cereals in both normal and special diets are invited to call at Booth No. 77 at the meeting. The Kellogg Company of Battle Creek, Michigan, will have an exhibit of their cereals. All-Bran Muffins and Kaffee Hag will be served. The Kellogg Company recently purchased the Kaffee Hag Corporation of Cleveland and will take this opportunity of introducing this delicious decaffeinated coffee to Doctors. Pamphlets containing diet suggestions and other information dealing with the relation of food and health will be distributed.

The Laboratory Products Company will occupy Booth No. 26, and exhibit their product S. M. A., which is an adaptation to breast milk, resembling breast milk both physically and chemically. S. M. A. in addition to giving excellent nutritional results in most cases, also helps to prevent rickets and spasmophilia. S. M. A. resembles breast milk not only in its protein, carbohydrate and salt content, but also in the character of the fat. It can be given in the same strength to normal infants from birth to twelve months of age, since the young infant can tolerate the fat as well as the other essential constituents in S. M. A.

Mead Johnson & Company of Evansville, Indiana, will exhibit their interesting line of products. Mead's Dextri-Maltose Number 1 is prepared with a 2% addition of sodium chloride, and is indicated for general infant feeding. Dextri-maltose number 2 is salt free so that the physician may add any salt that he desires. Dextri-maltose number 3 contains a 3% addition of potassium bicarbonate, and when added to cow's milk, overcomes the preponderance of calcium, and makes it better for constipated babies. Mead's standardized cod liver oil, Mead's Casec to correct fermentative diarrhoea,—Mead's Powdered Protein Milk which closely conforms to the Finkelstein formula, Mead's Lactic Acid Milk,—and Mead's Recolac are among the products to be in the exhibit. A number of interesting booklets, and other interesting literature for physicians will be distributed from the Booth.

"The Truth About Malpractice Protection" can be secured at Booth No. 70—The Medical Protective Company exhibit. Mr. A. B. Garber and Mr. J. E. McCurdy, long identified as representatives of this Company specializing in Professional Protection, will be at your service to discuss with you your needs and any questions which you may care to present.

The Annual Meetings of the Illinois State Medical Society offer unusual opportunities for physicians to discuss freely matters directly concerning products which they find of ad-

vantage to employ in their professional work. This is an outstanding reason for the Mellin's Food Company's exhibit and from this viewpoint a most cordial invitation to visit Booth 47 is extended to all physicians attending the 1928 meeting.

Qualified representatives of the Merrell-Soule Company, Inc., will be ready at all times to discuss the applications of the Merrell-Soule group of products in infant feeding and adult diet. KLIM Powdered whole Milk will be served and the technique of preparing Merrell-Soule Powdered Milk, Merrell-Soule Powdered Whole Lactic Acid Milk and their fat free companion products, will be demonstrated. Vi-Mal-Dex, a carbohydrate with added orange juice, will be featured and its applicability to certain feeding problems will be stressed. The exhibit will occupy Booth No. 51.

Middlewest Instrument Company, 1870 Ogden Avenue, Chicago, will display their new Jones Basal—a metabolism apparatus designed with the idea of combining all the usual accessories—the stand, barometer, oxygen tank, breathing connections and the instrument itself—all in one solidly combined unit, instead of providing these as separate pieces of equipment. Freedom from calculation will be shown as an unique feature of the instrument, and its portability by means of a small carrying case will be demonstrated. They will also introduce as new the method used in this instrument for doing away with the need of water or any kind of fluids in the apparatus.

Moores and Ross, Inc., Dietetic Laboratories, Columbus, Ohio, will have on exhibition in space No. 52, their two new products, Similac, and powdered whole milk. Similac is a modified cow's milk in which the elements of the milk have been modified to meet the nutritional requirements of a diet for infants deprived of breast milk. Powdered Whole Milk is a new departure in powdered milk, in that the dicalcium phosphate has been removed and the removal of this salt alters the curd formation so that a very soft flocculent curd is formed when this milk comes in contact with the digestive juices.

V. Mueller & Co. will have an unusually complete display of instruments for the General Surgeon with many new items not previously shown. In preparing this exhibit particular attention has been paid to instruments for the specialist. The Eye, Ear, Nose and Throat Specialist and the Urologist will each find his section of real interest. Items for special mention in the V. M. & Co. display are: Ether Vapor and Vacuum Equipment, Operay Multibeam Surgical Lights, Electrically Lighted Instruments, Bone Surgery Engines and Accessories, and the Lancaster Eye Magnet.

The E. L. Patch Company of Boston will exhibit Patch's Flavored Cod Liver Oil in Booths 65 and 66. This product is made in the Patch Company plants along the North Atlantic Coast from strictly fresh livers. Their representatives will be on hand ready to give full information regarding the manufacture of this oil and the process by which the oil is tested for Vitamins A and D. Here you will be able to see the codfish and its livers, together with the by-products of the cod liver oil industry. You will also find the laboratory animals which are used in the biological assay work. Whether or not you are familiar with this valuable product you will be interested in seeing this exhibit and hearing the complete story.

Granular effervescent Caknam, the systemic alkalinizer, will be displayed by F. H. Paxton & Sons, Chicago. Caknam is a physiologically balanced combination of the four bases—calcium, potassium, sodium and magnesium. It is rich in citrates and carbonates and contains no tartrates, which will be explained to visiting physicians. In addition to its effectiveness, as an alkalinizer, its perfect solubility and pleasant taste will be demonstrated.

The name "Phillips" identifies the original Milk of Magnesia, and it should be remembered because it symbolizes unvarying excellence and uniformity in quality. The merit of "Phillips" milk of magnesia as an ideal laxative-antacid is well established. For more than a half century it has had the endorsement of the medical profession. Phillips Milk of Magnesia, Phillips Dental magnesia, a superior tooth paste based on Phillips milk of magnesia, and Phillips Phospho-muriate of quinine compound will be on display at their booth. An invitation is extended to all physicians at the meeting to visit the exhibit and investigate these products.



The Physicians Supply and Drug Company, 427 South Honore Street, Chicago, will have an extensive exhibit of all late and improved surgical instruments and a number of new items in electrical apparatus which will be of unusual interest to those in attendance at the meeting. This reliable house caters to first class articles to please the careful buyer, and does not cater to discarded war stocks, cheap foreign or poorly made domestic articles. A cordial invitation is extended to all physicians present at the meeting to visit their booth, No. 74, and closely inspect all articles in the display.

Nearly every physician has frequent occasion to advise hay fever patients as to the most practical way to avoid their symptoms. The only sure way is of course, to avoid exposure to pollen. Pollenair filters provide pure pollen-free air at all times in any room or office, making of the room or office a hay fever resort. The patient working or sleeping in Pollenair filtered atmosphere remains symptom free. Pollenair filters are being demonstrated at Booth No. 31 by the Pollenair, Inc., Cleveland, Ohio.

The principal items to be exhibited by the Riggs Optical Company, are the new Nokrome "16" which they believe is the best bifocal they have yet offered to the profession—the new Clingwell 14K solid gold rimless spectacle mounting; light in weight, neat in appearance, yet so flexible that breaking seldom occurs, overcoming to a certain extent the objection to rimless lenses; the new Streak Refractoscope, teaching a new theory in retinoscopy; the new Bausch and Lomb Keratometer; Bausch and Lomb Stereo-Campimeter; Bausch and Lomb Interpupillary Gauge, and the Riggs certified prescription work and service for the most exacting member of the ophthalmological profession.

At Booth No. 58, Sanborn and Company will exhibit the latest developments in simplified Metabolisms and Electrocardiograph apparatus. Expert technicians will be on hand during the entire meeting to demonstrate the Grafic method of Metabolism testing. The Sanborn Grafic measures and records automatically the patient's oxygen consumption, giving a chart record that visibly tells if the test is normal, too high (hyperthyroid), or too low (hypothyroid.) Equipped with a table on smooth rolling casters the Sanborn Grafic is an excellent unit for Hospital use. The Sanborn Electrocardiograph will be exhibited and demonstrated. This is a satisfactory apparatus, maintaining the principle of the Einthoven String Galvanometer and operating parts of standard size and quality. It is arranged for portability or in a single transportable unit for hospital use.

Sargents Drug Store, 23 North Wabash Avenue, Chicago, will furnish their booth to look like a real ethical drug store featuring pharmaceuticals, biologicals, chemicals and other specialties used by the physician in his daily work. They will appreciate a call from those in attendance at the meeting.

The Saunders Booth will display a large number of new books, and a number of new editions of the more popular works. These may be examined by the physicians in attendance at the meeting. Included among these works are Cecil's Medicine; Blumer's Bedside Diagnosis; Pelouze's Gonorrhea in the Male; new edition of Ewing's Neoplastic Diseases; The Medical and Surgical Clinics of North America; American Illustrated Medical Dictionary; Rehfuess' Diseases of the Stomach; Crohn's Affections of the Stomach; Palfrey's Specialties in General Practice; McLester's Nutrition and Diet; Todd and Sanford's Clinical Diagnosis; Stevens Therapeutics; Jackson's Bronchoscopy; Ford's Bacteriology; Morse's Biochemistry.

Scanlon Morris Company will display their "White Line" Miltum in Parvo Specialist's Instrument and Treatment Cabinet; "White Line" Specialist's Chair for Treatment of Patients; "White Line" Sanitary Waste Pail; Specialist's Stool, and their Office Sterilizing Outfit.

The exhibit of G. H. Sherman of Detroit will consist of some interesting charts on the use of bacterial vaccines in the treatment of pneumonia, as experienced at Cook County Hospital, Chicago, and Bellevue Hospital, New York. This work embraces the treatment of over eleven hundred cases of pneumonia by Dr. Alexander Lambert, of New York, and Drs. Frederick Tice and Don C. Sutton of Chicago. These cases were

treated in controlled series so that it would be possible to make an accurate comparison of the results obtained with the usual symptomatic treatment and the effect of the addition of vaccines to the usual symptomatic treatment. At these institutions, it has been demonstrated that where the vaccine is administered within the first forty-eight hours of the onset of the pneumonia, the mortality can be reduced from an average of 47% to 7.8% in those cases in which Sherman vaccine was administered. Considering the fact that pneumonia is responsible for nearly one-tenth of all deaths in urban communities, this reliable series of controlled demonstrations, for the first time in the history of their use, should be of unusual interest to those attending the meeting.

J. R. Siebrandt Manufacturing Company, of Kansas City, will display a complete line of Modern Surgical Fracture Appliances designed by Siebrandt and which will be of interest to all physicians. Among these appliances will be Balkan Frames, Bucks Extensions and Aluminum Splints of every description and for all purposes. Of especial interest will be the latest designed Finger and Hand Splints, and a new adjustable clavicle splint.

The Spencer Lens Company has designed their exhibit so that a visit to it will be almost as valuable as a visit to their home office and factories, or a visit to their branch offices. Their display will interest not only those who may need such equipment as they have to offer, but will likewise have a decided educational value to all visitors. A complete line of microscopes, microtomes and all accessories pertaining to these instruments will be shown. Dark field illuminators, colorimeters for blood and urinary work, and a complete line of projectors will be on display. Their new No. 7-H microscope, a new idea in research instruments, will be of interest to Physicians, Medical Students, Hospital Technicians and Laboratory workers in general. For medical workers, they will have their No. 40-H microscopes, and Spencer microscope No. 6-H. The new medical microtomes are No. 815, No. 845, and No. 850.

The Spirella Company has taken space number 76 for the purpose of bringing before the physicians assembled at the meeting the service that Spirella Garments can render to their patients. All Physicians are cordially invited to attend the demonstrations on living models of Spirella Corrective and Supporting Garments for ptosis, postoperative and obstetrical cases. These demonstrations will be held in a private room at the hotel every day during the meeting. Appointments made for the showing of any particular garment in which a physician may be interested. Mrs. E. B. Whittemore, Educational Director, will be in charge of the demonstrations. "Spirella" is internationally known and approved. United States Headquarters, Niagara Falls, New York.

Among the things of particular interest in the exhibit of the Standard X-Ray Company of Chicago, will be a new flat top Bucky Diaphragm Table, which has many features of interest to the Roentgenologist. This table is equipped with an electrically operated Bucky diaphragm and electrically operated Stoscopic Shifts. They will also exhibit a new 95 P. K. V. X-Ray Machine with double disc rectification. This machine is so compact that it may readily be mounted on a shelf on the wall. A Stereoscopic Cassette Changer of advanced design will also be shown.

Ephedrine Hydrochloride, Pollens, Dextrose and Iodeikon capsules will be features at Booth 34 by Swan-Myers Company, of Indianapolis. This well known Company is well pleased with the reception the Illinois Physicians have given these Council-accepted specialties and wants you to become thoroughly acquainted with them. A comprehensive collection of Illinois Hay-fever flora will be available for reference, together with interesting atmospheric pollen data.

The Exhibit of the Victor X-Ray Corporation will consist mostly of Physical Therapy Apparatus. Included among these appliances are their vario-frequency Diathermy Apparatus, Wantz Multiple Wave Generator, Galvanic Controller, their complete line of Air- and Water-Cooled Ultra-violet Quartz lamps, and a new device for radiant heat therapy, the Victor Thermospectral Lamp, with interchangeable infrared and incandescent units. It is anticipated that the daily demonstra-

tions of the Victor Electrocardiograph will be an outstanding feature, as it has at many other meetings. All physicians at the meeting are invited to take the opportunity while in Chicago to visit the complete working exhibit of X-Ray and physical therapy apparatus at the Victor showrooms. Arrangements will be made to take visitors directly to the Victor factory, where such processes as the construction of the Coolidge tube should prove most interesting. A Jackson Boulevard bus takes one from the door of the Stevens Hotel to the Victor plant at Jackson and Robey.

The exhibit of the Wilson Laboratories, Chicago, will be largely devoted to that current topic the "Anemia Problem." There will be a demonstration of the new hematinic Spleen-marrow. This will show the value of this preparation in secondary anemia. A feature of the exhibit will be Wilson's Liver extract, a concentrated liver product in capsule form. It is particularly effective in pernicious anemia and is so moderately priced that it is as inexpensive for the patient as raw liver. Another interesting feature will be the "Farm to Pharmacy" display, which shows the various steps involved in the manufacture of gland products from the live animal to the finished product. Those wishing to see the stock-yards and how glands are collected will be personally conducted in groups. The gland specimens shown by the Wilson Laboratories are particularly fine, are mounted in a novel and practical way. The Wilson Laboratories invite all physicians at the meeting to visit Booth No. 48, and see these specimens as an aid in preserving their pathological specimens.

The Zimmer Company of Warsaw, Indiana, will show their Zimmer Splints made of aluminum, and incorporating many added refinements this year. The new forearm extension and Potts fracture splints are receiving many favorable comments, and will be of interest to all who handle fracture cases. These valuable appliances will be exhibited in Booth No. 79, and the Zimmer Company representatives will demonstrate the value of their splints to all who call during the meeting.

The Hanovia Chemical and Manufacturing Company of Newark, N. J., will exhibit their Ultra Violet Quartz Lamps in Booth No. 71, and extend to all physicians a cordial invitation to visit them, and learn at first hand the pertinent facts. The Alpine Sun and Kromayer Quartz Lamps will be featured in the exhibit, in their different guises. Particular attention is called to the new adaptations of the new radiant heat lamp element as shown in the Sollux Lamp, both the large and the small model. These lamps have particular features which will be of interest to all physicians. Members of the Staff of this well known Company will be on hand to place before the physicians any data that may be desired by them.

The Uhlemann Optical Company of Chicago will show the latest specialties, frames and mountings, and some new and interesting scientific equipment which has not previously been exhibited. This equipment is manufactured by Carl Zeiss, Inc., and others. Stereophotographs taken with the Zeiss Automatic Stereo Camera for Photographing the Outer Segment of the Eye, will be shown. These illustrate some unusual cases. An attractive souvenir for Ophthalmologists who register at the Booth has been prepared.

DePuy invites your inspection of the many new splints including the Easton Cockup, DePuy Rolled Colles, Improved Clavicle Appliance, and the DePuy Adjustable Clavicular Cross. All physicians will be welcome at the DePuy Manufacturing Company's Booth, No. 41. W. D. Bates, who is well known to most of the physicians at the meeting will be in charge of the exhibit, and will gladly care for your wants or show you the new splints.

There may be "nothing new under the sun," but there will be many new apparatus and instruments displayed at the Meyrowitz Booth. Just to mention a few—The May and Giant New Model Ophthalmoscope, The Schild Prism, The Witelite Diagnostic Set—will be shown in the line of the new diagnostic instruments. The Thornwald's Antrum and Frontal Sinus Hand Drill, Ruskin's Double Jointed Mastoid Rongeur and Septal Forceps, Kaplan's Ear Syringe, Giglio, Schlander, Blakesley's Ethmoid Forceps and many rustless instruments

will be the others that will reward a trip to the Booth. Every-one present at the meeting is invited to visit the E. B. Meyrowitz Surgical Instrument Company Exhibit.

Child's Drug Company, Chicago, representing Fraser Tablet Company, also Morgenstern's chemical line, will exhibit a complete line of both firms, featuring Fraser's Barmidon Tablet, a most powerful and harmless analgesic, being non-depressing, non-habitating, not only affording symptomatic relief but also prevents shock which is generally recognized as being dangerous to the general condition. The exhibit will display a number of other specialties too numerous to mention.

The Well-Known McIntosh line of Physical Therapy equipment will be exhibited in Booth No. 54. Prominent amongst this exhibit will be the much discussed McIntosh Model Alpine Sun Lamp and the McIntosh Polysine Generator. The Hogan Super-Power High Frequency Apparatus will be in evidence, as also the portable Diathermy Unit. A new range of Infra-Red Generators will also be on display. The Mercury Vapor Quartz High Frequency Electrodes; a full assortment of electrodes and accessories used in conjunction with Physical Therapy equipment, will also be tastefully displayed. There will be in attendance at the exhibit a staff of experts ready and willing to afford courteous information on any piece of equipment exhibited. You will be heartily welcomed by those in charge and this will afford an opportunity of inspecting up-to-date Physical Therapy apparatus and accessories.

Manhattan Coat Factory, Chicago, will exhibit a fine line of garments such as uniforms for nurses, office assistants, professional garments, for the doctors to be worn in the office as well as those to be worn while operating in hospitals or in general attendance there. Among the exhibits will be Protexwel fabric throws which may be used generally and by Eye, Ear and Throat specialists in performing minor operations, to protect the patient from blood, etc. These throws can be sterilized and washed thoroughly to make them usable continuously as they are not made of rubber but are absolutely water proof. They will not deteriorate, crack or peel. The latest models of Doctors' and Nurses' coats and uniforms will be displayed, some of them entirely new designs.

The National Dairy Council will have an exhibit depicting the importance of proper diet throughout a child's growing period in order to maintain good health in adult life. Emphasis is placed on the health-protecting foods—milk, leafy green vegetables and fruits.

The Chippewa Spring Water Company of Chicago located at 1318 South Canal Street, will exhibit in space No. 82. The display will consist of Chippewa Natural Spring Water, Chippewa Dry Ginger Ale, Chippewa Root Beer, and Carbonated Water. Miss A. F. Walker, Chemist, will conduct a miniature laboratory, and will demonstrate the purity of Chippewa Natural water, show its softness, and prove that it is unexcelled in its field.

## Correspondence

### CONSTITUTIONAL PHILANTHROPIC INFERIORITY IS LIKE CONSTITUTIONAL PSYCHOPATHIC INFERIORITY IN THE MENTAL ORDER

Brooklyn, N. Y., March 5, 1928.

To the Editor:

Constitutional philanthropic inferiority, in the social order, is like constitutional psychopathic inferiority, in the mental order—pretending you're hell when you're not even a bonfire.

In the court of conscience there are no ac-



quittals. The professional philanthropist who spreads propaganda, the false doctrinaire who furnishes it and the moneybund foundation supplying the working capital for the uplift organization, which, in turn uses the faculties and facilities of all three parts of the infernal triangle, know, each in their heart of hearts, that the end-result of their work tends to the corruption of democracy by bureaucracy. This means replacing self-reliance with parasitism; catering to the something-for-nothing-lads, and advancing the purposes of the high priests of the congregations of worshippers at the shrine of something else than Americanism. Saddest of all, this involves changing the triune form of government designed by the founders of this nation as legislative, executive and judicial, into government by the police power of the state vested in the hands of individuals, employed in bureaus of a department of the executive branch of the government, with power to make rules and regulations which have the force and effect of statutes. This, too though is not enacted by the legislative branch of the government, and not subject to review or correction or adjustment in conformity with the Constitution of the United States by any power residing in the judicial branch of the government of the country.

Is this indictment harsh and unwarranted? Now Article VIII of the Constitution of the United States forbids the infliction of cruel and unusual punishment. Article I, Section 8, subdivision 1, empowers Congress to provide for the common defense and general welfare. This is the section from which flows the police power of the state—a power reserved to the executive branch of the government to declare illegal, as a matter of public policy, things that are in themselves lawful.

Similar police power of the state exists in the component states of the union and its normal, reasonable operation may be seen in varied examples. It is lawful to make soap, at home or in a factory, by rendering out animal fat. It is lawful to make and to store dynamite. It is lawful to make steam boilers. It is lawful to let the waste from a house or factory run into a waterway, directly or by way of a sewer. But for individual protection it is not legal to conduct a soap factory in a residential district, to store dynamite

next to a school, to run a boiler factory next door to a hospital or to run waste into a waterway from which a community derives drinking water. If, as a matter of public policy, the state decides to use the police power in that way, the legislature or the people could expand the use of that police power to forbid and to make illegal any of those things without limitation whatsoever. It would not be hard for American citizens who have observed the operation of the Volstead Law since 1921 to conceive a fanatic thus using the police power, provided, by some act of the legislature he was so empowered, as chief of a bureau, to make rules and regulations having the force and effect of statute. Only a legislative act, wiping out this man's bureau, could put an end to the condition. The courts could not. Doubtless this was in the mind of Thomas Jefferson when he said:

"It would be the greatest delusion were we to let confidence in the men of our choice silence our fears for the safety of our rights. Confidence is everywhere the parent of despotism. True government depends upon jealousy, not on confidence."

This was probably in the mind of John Marshall, Chief Justice of the United States Supreme Court (1837) when, in *Brown vs. Maryland*, he said:

"Questions of power do not depend upon the degree to which it may be used; if it may be used at all it must be used at the will of those in whose hands it is placed."

The United States Supreme Court has declared a Virginia sterilization law constitutional. Despite Article VIII, this cruel and unusual punishment is inflicted upon one class of persons (inmates of prisons, hospitals for the insane, epileptics, and mental defectives). Still this penalty is forbidden and not demanded upon that class of persons afflicted with these same physical or mental diseases and guilty of the same certain types of crimes, yet not confined in institutions. No public clamor for this, understand! Just agitation by groups of uplifters! The citizenry, meanwhile, while this law was being projected, turned its radio dials to get "jazz," and paid not a particle of attention to this scheme until it was "put over."

Suppose some busybody lifter had objected

to Nancy Hanks and Thomas Lincoln entering upon marriage because some fool psycho-analyst had submitted these two to a Stanward revision of the Binet-Simon test and found they could not spell, define and apply such words as "complot, disproportionate, homunculus, incrustation, limpet, paleology, parterre, precipitancy, retroactive, and shagreen; or promptly recite, backward and forward, 7, 2, 5, 3, 4, 8, 9, 6." They say a youth of 18 years should be able to do this. Suppose Nancy Hanks and Thomas Lincoln had been sent to an institution for mental defectives and sterilized. The world could not have had "the man of the ages."

New York State and New Jersey declared this sterilization policy unconstitutional in that it was cruel and unusual and that it denied equal rights to a class of citizens confined in an institution as compared with a similar class (epileptics) on the outside. Now this policy is being agitated again in New York, on the strength of the confessed helplessness of the judicial branch of the United States government to save the citizen of Virginia from the exercise of plenary police power of the state delegated to a bureau by the people's elected representatives.

Why did not the people exercise the ounce of prevention and avert this pound of regret, say you? Why don't you, doctor? Why don't you arouse your county medical society and your state society and the American Medical Association and make them play the game as guardians and advisors of their people?

You fought and discredited compulsory health insurance in 1919-20. Why? Because this law threatened to interfere with your financial independence? No. Or because it threatened to impair the quality of your service to the people? Yes. Because you knew the future of medicine and the health of the people was at stake. You don't suppose for a moment that the professional philanthropist, the false doctrinaire and the moneybund foundations and their creatures such as the uplift organization of the American (?) Association for Labor Legislation type, or the Women's Trade Union League, or the Voluntary (?) Parenthood League, or the Birth-Control League, or the Young People's Socialist League type took as final the defeat of 1919-20? Not for a moment! These same organizations put

over the Sheppard-Towner Maternity Bill in 1921, and the A. M. A. helped them! *Also this group threatens to use the annual meeting of the New York State Medical Society at Albany, May 22, 1928, and the machinery and journal of that organization, if power can seduce some of the leaders, as was done in 1919-20, to stage a comeback for compulsory health insurance. This in face of the fact that compulsory health insurance yielded a strike of 1,400 doctors in 1923 in England and an "alarming increase in the deaths of women in childbirth from sepsis," as the English Registrar-General officially warned his government in 1922.* You should know these things. The Associated Press carried it in your newspaper at the time. Please, please, make your county society a body of medical citizens as well as a group of medical practitioners. Tell your people, who have the votes, just what is this "constitutional philanthropic inferiority."

Let your people know. Make them understand that in addition to engrafting vicious European communistic policies on the tree of state in America, this infernal triangle has to take care of the graduates and affiliates of those "foundations" and schools of sociology, psychology and philanthropy.

The state is a good paymaster. Where does the money come from to reimburse, in kind, the moneybund foundations that furnish the working capital for uplift organizations? The government has not a nickel it can call its own. Governments function solely upon monies derived from imposts and taxes. These flow, in constantly increasing floods, from the pockets of the taxpayers to the state and national treasuries, returning, in the tiniest of rivulets, after passing through the tortuous, thirsty beds of federal and state patronage sand.

Let me give you an example. The State of New York pays twenty-five cents of every dollar of internal revenue collected and disbursed in this country. The Sheppard-Towner Maternity Act costs about \$2,000,000 per annum. New York State pays half a million dollars (\$500,000) toward the operation of that bill, and receives in return the privilege of spending \$155,744 of its own money. This is, provided, that plans of the citizens and taxpayers of New York State for the care of maternity and infancy within the



state are submitted to and approved by the chief of the Children's Bureau of the Federal Department of Labor. This chief is an affiliate of Hull House of Chicago—the Rand School of the Middle West!

Barnum was right. "The American public loves to be humbugged." The American public recognized the less-than-bonfire dimensions of the constitutionality inferior philanthropist when he tried to put over the twentieth or Child Labor Amendment. This would have "controlled, limited or prohibited the labor of children under 18 years of age and so made a nation of loafers. Wake up that public now!

JOHN J. A. O'REILLY, M. D.  
1028 Union St.

#### INTEREST OF CLUB WOMEN IN TOXIN-ANTITOXIN

*To the Editor:*

I thought you might be interested in this letter from one of the State Health Department's nurses, concerning the interest of the club women in the toxin-antitoxin and pre-school child examination work. Perhaps you would like to publish it in the Journal.

Cordially yours,

LENA K. SADLER,  
State Chairman of Public Health and Child  
Welfare Illinois Federation of Women's Clubs.  
State of Illinois

#### DEPARTMENT OF PUBLIC HEALTH Springfield

318 S. Bankers St.,  
Effingham, Illinois,  
February 25, 1928.

*My dear Dr. Sadler:*

Perhaps you will be pleased to hear of the splendid cooperation of the Altamont Woman's Club in the recent toxin-antitoxin campaign. The young president, Mrs. Edgar Hoffmeister, and her members gave time and service generously with the publicity, and in interesting the two parochial schools, with clerical work, and she and six other women came each Friday of the three administrations. One member is a nurse and I don't know what I should have done without her. Three hundred ninety-seven children were given toxin-antitoxin, 76 of whom were pre-school and 17 rural school children. I cannot tell you how much I appreciated their assistance.

Since talking to you the Raymond Woman's Club, with Mrs. Edna McConathy as president, have helped with physical examination of 108 school children. They are certainly hustlers and I liked their spirit of helpfulness very much. The two physicians and the dentist commented on it also.

Yours very truly,

SARAH E. DAILY, R. N.,  
Regional Nurse Dist. 10.

#### A NEW NEEDLE

A new needle for gastro-intestinal suturing, which has an eye in the center and is made either curved or straight, is claimed to be an improvement over other needles for this purpose because it enables the surgeon and his assistant each to do one-half of the suturing. The use of both pronation and supination of the wrist in entering or withdrawing of the needle saves about one-half of the time usually consumed in closing the wound.

Demonstrated before the McDonough County Medical Society March 6, 1928.

JOSEPH B. BACON, M. D.,  
Macomb, Illinois.

#### THE ORIGIN OF SPEECHES

Plutarch: "I am sorry that I have no more lives to give to my country."

Samson: "I'm strong for you, kid."

Jonah: "You can't keep a good man down."

Cleopatra: "You're as easy as Mark Anthnoy."

David: "The bigger they are the harder they fall."

Helen of Troy: "So this is Paris."

Columbus: "I don't know where I'm going, but I'm on my way."

Nero: "Keep the homefires burning."

Solomon: "I love the ladies."

Noah: "It floats."

Methuselah: "The first hundred years are the hardest."

"Queen Elizabeth to Sir Walter Raleigh: "Keep your shirt on."

#### EXEMPLARY DAMAGES

It was very early in the morning when hubby returned home. Asked to explain his absence he said he had been held up and locked in a telephone booth by a bold bandit and, although he had several \$5 bills, he didn't have a nickel to 'phone home or to the police.

Did his wife miss him much? She hit him every time. The doctor says it will be months before he will be held up by anyone but nurses.

## Original Articles

### THE NECESSARY FOUNDATION FOR THE HEALTH MOVEMENT\*

J. HOWARD BEARD, M. D.,

URBANA, ILLINOIS

The ultimate success of preventive medicine is dependent upon the promptness and thoroughness with which its principles are applied. In other words, the necessary foundation of the health movement is the guarantee that the interval between the discovery of the problem and the adoption of its solution shall not be disastrous. The difficulty of giving this assurance is stupendous. It challenges democracy itself, because public health is more and more requiring majority action to obtain individual benefit.

The development of engineering, and of transportation, the shifting of the center of population from the country to the city, and the consequent rise of industrialism are creating new sanitary problems as fast, if not faster, than experts can be provided to solve them, and more rapidly than it is possible to produce public sentiment willing to give them necessary financial and moral support essential to their solution. The race is between education and catastrophe with the welfare of humanity as the stake.

As history is filled with instances where emotion, indifference, duplicity, and the restriction of knowledge to a minority, proved calamitous, the most incorrigible optimist can not disregard its lessons. Preventive medicine must be applied rapidly, if civilization is to maintain steady progress and avoid having the achievements of one millennium become the chief interest of the archaeological excavator of the next.

The stability of the modern state is as dependent upon the full use of science to promote health in the broad sense of living most and serving best, as it is upon means of communication or upon the literacy of its citizens. If preventive medicine is to have an opportunity to do the most for society by reducing suffering, by preventing economic loss, and by increasing happiness, the average individual must as thoroughly understand its value to his daily life as he does that of mathematics and language. Hygiene

is powerless to give the public the full benefit of the great discoveries of science and of the enormous sums given by philanthropists and bodies politic for research until education has accomplished the four-fold purpose:

(a) of enlisting intelligent citizens who will give the highly trained corps of sanitary experts who direct health work the support necessary to obtain results commensurate with present scientific progress.

(b) of increasing and motivating the health knowledge of the individual until even in a democracy, fads and frauds that rob and injure the public will be recognized and eradicated.

(c) of obliterating the zone between what is being done and what may be accomplished in public health.

(d) of rendering more comprehensible the relation of the health aspects of scientific and cultural subjects to life.

*The Great Need of Lay Co-operation.* The need of lay co-operation is greater than ever in the history of the health movement because of the increasing complexity of life and the trend of hygiene.

From an era of sanitation, preventive medicine passed to one of personal hygiene, and now is tending toward group promotion of health without abandoning any of the major projects of its previous epochs. For this reason it requires greater co-operation of the individual to promote the common good. The future advancement of the health movement is dependent upon the success of making each citizen an active public health worker.

To improve health in the group life produced by the urbanization of the greater part of the population and by industrialism, men and women must be willing to direct, release, and restrict their fundamental instincts of acquisitiveness, of preservation and reproduction in the interests of themselves and of the race. It will take the united efforts of every forward looking person to raise the public health to such a physical, mental, and moral level that the relative decrease in the rural inhabitants of the country may continue indefinitely without our civilization losing its vigor. To meet this situation and the nearness of city and country as the result of better transportation facilities, sanitarians will need the help of every high school and college gradu-

\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Tuesday, May 31, 1927, Moline, Illinois.



ate for they will have the training and ideals essential to increase the span of life and to add to the sum of human happiness. They must be trained to appreciate the relation of health to human progress and their obligation as citizens to create, support, and demand that the organizations in charge of health work shall produce a maximum result in a minimum time.

*The Rising Tide of Quackery.* The health movement faces a rising tide of charlatanism. Quackery is as old as history but it has changed its form with every age to take advantage of every discovery. It never has been so high-powered nor more able to deceive the average layman than today. The recent great developments of science afford it so many chances for new disguise in apparatus, method, and formula that it has become a menace to both medicine and to public health.

Though the truth is said always to triumph, the odds favor quackery. While a scientific fact is single, fraud built about it may be multiple. Quackery has only the inspiration of exploitation for profit; medicine inherits a tradition against publicity and an ideal of service to humanity. Medicine is in a golden age, but fakes never before have had fifty years of unprecedented discoveries which they can counterfeit almost indefinitely. The health movement is handicapped by the fact that it is easier to educate to buy than to educate to understand. Besides mankind in general seems more resistant to truth than to humbuggery.

As medicine becomes more and more technical by the application of biology, physics, and chemistry to control, diagnose, and treat disease, education alone can prevent the mountebank from having a better opportunity to prey upon the public through pseudo-science. The general scientific information of the laity must be increased fast enough to make it impossible for quackery to retard the advance of the health movement. Only the white light of the searching rays of public knowledge can give true perspective and contrast to the purpose of preventive medicine and that of the "antis," "isms," and "pathies" which delay and block its progress by misleading propaganda and recurrent legislative programs in every state in the Union.

The failure during the last two decades to keep public information abreast with discovery

by teaching systematically in the schools the application of science to the promotion of health has produced a harvest of tares. Not only the illiterate and uneducated are ignorant of the general structure, function and operation of the human machine, and are unable to protect themselves against the quack, but a number of recognized experts in their particular fields, undergo treatment that is anatomically absurd, physiologically ridiculous, and as physically exact as the extraction of sunbeams from cucumbers.

These fine but scientifically uninformed individuals, the natural allies of preventive medicine, become victims of fraud and their influence is lost to the health movement because of their lack of usable knowledge of elementary biology, physics, and chemistry. The charlatan profits by their ignorance of the factors of health, deceives them, and uses their high sense of justice, their reputation, ability and resourcefulness to perpetuate his cult and to reach more of the gullible.

There is no more enduring foundation for the health movement than systematic education in science because it creates a consciousness responsive to health ideals. High school and college students may be so trained that when they become community leaders they will protect both themselves and their less informed associates from the exploitation of the unscrupulous by measuring the proposals in the name of medicine by the principles of physics, chemistry, and biology instead of accepting fraud as fact.

*The No Man's Land of the Public Health Movement.* The great problem of the health movement lies between the present magnificent accomplishments of preventive medicine and the possibility to improve further personal and public health by the use of available knowledge. The boundaries of this zone separating what is being done, from what may be done, are at points approaching co-incidence but at others have become static or are so diverging that it will take at least three generations to pass from the actual to the possible. The difficulty in obliterating this zone is not only due to a lack of public appreciation of the personal, social, and economic advantages to be gained but to opposition of the united forces of those who desire to exploit the public for selfish purposes.

In the period from Jenner to Dick, the health

movement made more progress than in all the preceding centuries, but parallel development in the mechanical arts, in the use of electrical energy, in the application of chemistry, in the advancement of methods of communication, and the urbanization of a greater part of the population of the country tend to make its extraordinary achievement more relative than outstanding.

In the last fifty years of this century and a quarter, chemistry, physics, biology and engineering have had a Periclean Age that has made possible an unparalleled era of industry, commerce, and construction that have created two new health problems for each old one solved. Fortunately, with this advancement has come not only its associated sanitary difficulties but in many instances the means for meeting them. Yet, the need for health protection and the use of the proper methods to provide it are rarely coetaneous because of the necessity of creating sentiment to gain public support and legislative action. This delay, often of years, broadens the zone between what can be and what is being done to promote health and favors the multiplication of problems without a corresponding increase in their solutions.

When the people have been aroused to demand that performance should be commensurate with possibility, the actual and the ideal have become one and health has taken the place of disease. "Phossy jaw" was driven from the match industry. Yellow fever was ejected from its old home in the South, cholera was kept beyond the seaboard, and plague was suppressed in California and New Orleans. Typhus fever was robbed of its epidemicity and virulent smallpox was controlled by vaccination.

With the exception of phosphorus poisoning, these diseases tend to be explosive in onset, rapid in extension, and frightful in mortality. Their power to destroy life and to disrupt business is so great that their names instinctively excite terror and produce an immediate demand from the public that no measure be omitted to prevent their spread. Our ancestors were so educated in the school of sad experience concerning them that tradition has given all civilized men a serpent-like dread of them, that is effective in enforcing measures for their control.

In this regard, the strains of smallpox offer a

great contrast. The virulent form is respected and in its presence the voice of the anti-vaccinationist is subdued. Because of its low mortality rate the mild type is a poor educator and is declared by members of the "No Scar Club" to be preferable to vaccination. By this attitude a gap is made between the possibility of vaccination and the occurrence of smallpox that permits the presence of over 30,000 cases in the United States annually.

That the history of typhoid fever, rabies, diphtheria and scarlatina will be similar to that of avirulent smallpox seems almost obvious, because the same forces are operating to preserve them for the distress as well as the enlightenment of man. Their trend on the whole has been rapidly downward but their eradication is hardly possible without the wide use of virus, vaccine and toxoid,—terms which cause certain individuals to forsake facts, to talk wildly and to resort to law. If to this situation is added the human tendency to tolerate a large total of preventable deaths provided they are well scattered throughout the country and also the natural complacency of the public when danger is impending rather than actual, much is done to insure that these diseases shall be safe from extinction for years to come.

The inherent right of every man to have an opinion about anything and to express it, is essential to liberty but it often leads to the tragic practice of ignorance dominating science and retardation of the health movement. Unfortunately, uninformed opinion upon the efficacy of smallpox vaccination, the value of serum, the causation of cancer, or of the bacterial content of water as revealed by the naked eye, is accepted as fact or frequently is given the same value as that of a scientist.

Some persons not only disparage expert opinion but take the ridiculous position that an individual with special aptitude for one thing is prepared ideally to deal with something altogether different. So the consensus of opinion of the butcher, the baker, and the candle-stick maker on a model milk ordinance is given sometimes the same weight as that of the Surgeon-General of the Public Health Service, the director of the state department of health and the local health officer.

If the distance between the actual and possible



in health promotion is neither to become fixed nor to grow greater, intelligent public opinion must become dynamic. Education must give it motivation so that it will insist upon the eradication of preventable disease and will assume the more difficult task of rendering harmless those who Samson-like would destroy the rest of the population along with themselves in wrecking the temple of preventive medicine.

*Putting Momentum Into the Health Movement.* Science is not secret information, but public truth, the birthright of all. It touches life at every point, yet is valueless to the average man unless he is taught either to make use of its principles or to select some one capable of doing so for him. In terms of the health movement this means each individual has to be educated: 1 to appreciate science as it pertains to him personally and to his environment, 2 to choose competent physicians and sanitarians who will serve him and his community as medical advisers and health officials.

The health movement receives a new impetus once the laity understands there is no profession without its health problem. When it is known generally that conditions influencing health and human efficiency are so important in vocation as to be more or less decisive in determining the ultimate success of those engaged in it, the future of the health movement is assured.

High school and college students are the key to the situation. They must be told the history of pneumonia at the Rand, yellow fever at Panama, hookworm anemia among the employees of the Southern factories, the use of lead in 150 trades, the menace of dust in industry, and the blight of malaria to agriculture in the lower Mississippi valley. Let them have the story of the part played by disease in the destruction of the empires of the past. Have them see the forces that are undermining the vitality of their own nation and give them the knowledge essential to preserve it.

Teach them the health hazards of the school and their relation to the spread of epidemics, particularly in rural communities. Let the student of social science learn before he has completed his course, that unrest and anti-social acts and theories are frequently the hybrid offspring of bad living and working conditions. Have the future engineer know that a sick employee may

prove as great a liability, as a flaw in steel or an error in reinforcement.

Whether the student is preparing to become a farmer, a lawyer, an industrial manager, a business man, a teacher, or a housewife, he or she should know how to operate and protect the human machine. He should have an appreciation of the fact that the practice of medicine is based on scientific knowledge and not on mystery and should choose his medical adviser accordingly. He should understand that unless he gives attention to the health phases of his work, his technical knowledge will be used with difficulty.

The only hope for the steady progress of the health movement lies in education that gives information, motivates truth, applies science, and creates an active spirit of co-operation that is impatient of indifference and intolerant of handicaps erected by individuals wishing to exploit the public for selfish ends. This education to be effective must begin with prospective parents and guide the child through infancy and childhood. In the elementary school it must teach the rules of healthful living and in the high school and college so instruct the future community leader in hygiene that he will be prepared to grapple successfully with the health problems of his home, community, and vocation. Such education must begin early, be systematic, and be progressive enough to keep knowledge abreast with discovery, because it is the necessary foundation of the health movement,—man's true legacy to man.

#### DISCUSSION

Dr. William S. Keister, Decatur: It is rather hard for me to discuss such an intellectual paper as this. Dr. Beard has covered most of the points. I can emphasize a few things and possibly add one or two points. One point he made particularly—that modern conditions have brought about a change in health conditions and in hazards and accidents; automobiles and industrial conditions have added to the problems of the public health officers. And when we review the accomplishments of the health officers during the last fifty or one hundred years, we must take into consideration the fact that we have controlled the conditions they had at that time and are also working under added handicaps, and we must add to our percentages the added handicaps that they would not have had in the old days, and the changed conditions due to changes in industry and other modes of living. We are closer neighbors today and it is easier to spread epidemics. With our scientific knowledge and the application of better methods our success is even greater

than would appear on the surface. Our needs are growing faster than our personnel—our trained helpers. It is hard to train enough competent people to meet our needs. We must not forget that though the need is great the people are few. The public has not fully appreciated what can be done in public health. As Dr. Beard says there is a big gap between what is done and what needs to be done. If health work is a good thing for Podunk County, why not for every county? It is a good thing for every town, yet how many of our cities and towns are really organized on a good basis? When a tragedy occurs there is a race between public sentiment and the catastrophe. It is too bad that all the deaths that occur from tuberculosis in a year do not all occur within a week. If we had the same number in a week active measures would be taken right away. The public would be alive to what a terrible thing had happened. We need a few more terrific accidents (?). The deaths from tuberculosis and other preventable diseases are spread out over too great a period of time. We never have any trouble in stopping an active epidemic of typhoid fever, for instance. If ten or a hundred people die in a week, the city treasurer would appropriate all the money there was to check it, if necessary. But when a number of people die over a long period of time it does not create comment. Science is necessary to promote health as well as other business. The radio, the automobile, and various other scientific accomplishments have advanced in other lines, and have created greater problems for the health officers to meet. Dr. Beard brought out another point, that of cooperation. You cannot get far unless you get the public with you, the intelligent people with you. I am sorry to say that a good many people who are intelligent in one way are not intelligent in health ways. Christian Scientists for instance, and even quite frequently university professors. Intelligence in health is quite different from intelligence in education. We need intelligent health cooperation, especially of the people who have the ability to know what is best in public health work. I am reminded of the woman who kept after her husband about cleaning up a certain place in the town. I think he was the mayor of the town. She kept at him about it until he said, "You are beginning to get on my nerves," and she answered "Yes, that is what I have been trying to do." We do not do all we should do in public health work, as I said before. Our communities are doing only what they have to do, most of the time. It is unfortunate that public health should have to force its way in, beg and force its way to get certain things done. That is a poor way, but sometimes we have to compel people to do things. In California they stopped the bubonic plague, but it had to be forced on the population. Not only college and high school students should be educated in public health, but the medical students also. How much is being done to educate the doctor in public health? We have hardly any courses in the schools which cover this. And above all, let us try and see if we cannot get it out of politics.

## HYSTERIA\*

HUGH T. PATRICK, M. D.

CHICAGO

Probably not a stock raiser or dairy farmer in the state of Illinois can define a cow. None the less, these men know cows well, breed and raise them successfully and milk them profitably. Similarly, though no one has successfully formulated a definition of hysteria, we really know quite a lot about it. Of course it belongs to the psycho-neuroses. That is to say it is not a disease but a disorder. It is an abnormal behavior reaction frequently taking on the form of some bodily ailment. It is *not* simulation or malingering. Though clearly a psycho-neurosis, its borders and delimitations are decidedly vague. This is of no practical importance. Whether the malady of a *given patient* be called hysteria, psychasthenia, anxiety state, traumatic neurosis or maladjustment is not essential *provided* we understand the nature, the mechanism, the etiology of his trouble and have the skill to control the situation.

Perhaps the best way to approach the subject is by way of the war neuroses because most of them were relatively simple in genesis. Take our own soldiers: a picked lot; and yet some of them could not fit into the life of the training camps with all that it was and *all that it portended*. Consequently they fell ill with various nervous disorders. In different training camps I examined typical cases of what foolishly had been called shell shock in men who never had seen a cannon nor heard a shell: cases of paralysis, convulsions, tremors, shakings, bent back, (camptocormia) impaired sight and hearing, aphonia, stuttering, etc. Others broke only after reaching the camps in France or just back of the firing line. And, finally, some stood it up to the intolerable life in the trenches or the combat itself when they "went to pieces" in the form of some nervous disorder. Now, in all of them the mechanism and the results were the same. The man just couldn't bear the situation, and for cogent reasons he couldn't run away. The nervous disorder was a behavior reaction; a disagreeable means of escape from something which for him was infinitely worse; a *sub-conscious* dodging of the issue; a psychological

\*Read before the Chicago Medical Society, January 26, 1928.



dugout into which to crawl; an uncomfortable dugout to be sure, but an escape just the same. Note that I emphasize the subconscious. These men were not deliberately feigning. They were not malingeringers. None the less, from their standpoint, they profited by their illness. Note further, that the men who lost an arm or an eye or had a nerve trunk cut or a buttock blown

What before was tolerable had become intolerable.

Another ex-service man was quite disabled by spasmodic wry neck, other local spasms, headache, insomnia and general weakness. His war record was fine. He had climbed from private to captain and was somebody. Before the war he had been a rather humble citizen, had never earned over \$2,500 a year. Now he wished to marry a girl of social position and said he could not on less than \$5,000 a year. He wouldn't give up the girl and he couldn't get the \$5,000. The nervous disorders were his answer—and his appeal to Uncle Sam to solve the problem. (I don't mean that these men were impostors and malingeringers. This dodging is more or less unconscious, or subconscious).

Now, our daily life is full of difficult situations: perplexities, disappointments, things that frighten us, things that disgust us; fights that we hate to make; labors that seem too heavy; problems we can't solve; luscious grapes beyond

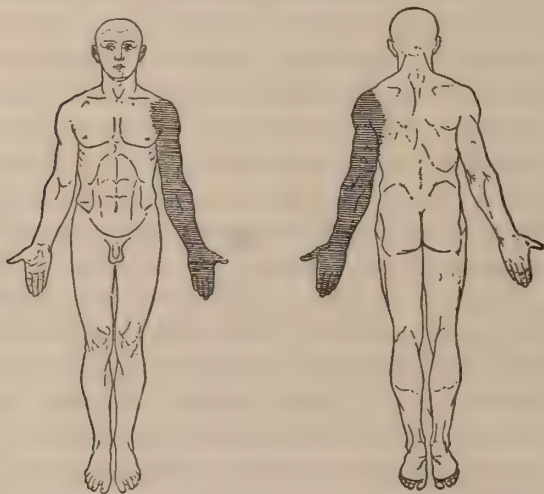


Figure 1. Case of hysterical paralysis of left arm. Shading shows anesthesia (and analgesia) of distribution not corresponding to nerve supply and with sharp border.

out never developed a psycho-neurosis. At least not until afterward when a readjustment to a new difficult situation had to be made. Even then these organic cases seldom developed a frank psycho-neurosis. They didn't need to. After the armistice in some of the returned soldiers we had postwar neuroses. Why? The man couldn't adjust himself to the situation when he got back.

A colored boy who had gone through the war fairly well was sent to me with campyocormia, (bent back); he was constantly bent forward and sidewise and walked clumsily. In ten minutes I had his back straight but the next day he was as bad as ever. Why? Before the war he had been a porter in a barber shop. Now, he wished the government to pay him a monthly stipend, send him to a technical school for three years and make of him a civil engineer. Naturally, if his back remained straight and well, it meant back to the barber shop, an unendurable prospect. The war had changed his views of life and his feeling as to his relations to society.

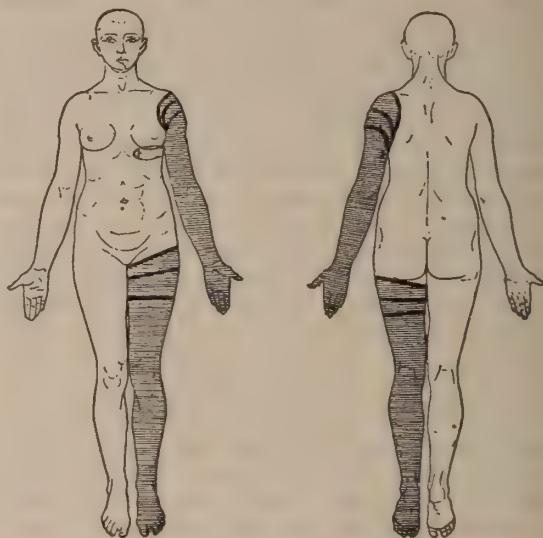


Figure 2. Hysterical paresis of left leg and arm. Shading shows distribution of "sleeve" and "stocking" anesthesia with sharp border. Heavy lines show how border shifted at repeated examinations within a few minutes.

our reach; especially conflicts between our fundamental trends and the laws, edicts and taboos of the social cosmos. Some of us meet these manifold difficulties pretty well and an indulgent public calls us normal. Some of us can't or won't make this adjustment and we then are the unsuccessful, the unhappy, the cranks, the

drunkards, the phobics, the *hysterics*; the dwellers in sanitariums; part of the throng that fills the reception rooms of specialists.

A perfect type of the psycho-neurosis is (in most instances) ambulatory automatism: what the newspapers call amnesia. The patient suddenly disappears from his ordinary haunts, wanders about or settles down elsewhere under another name until, soon or late, he has doubts

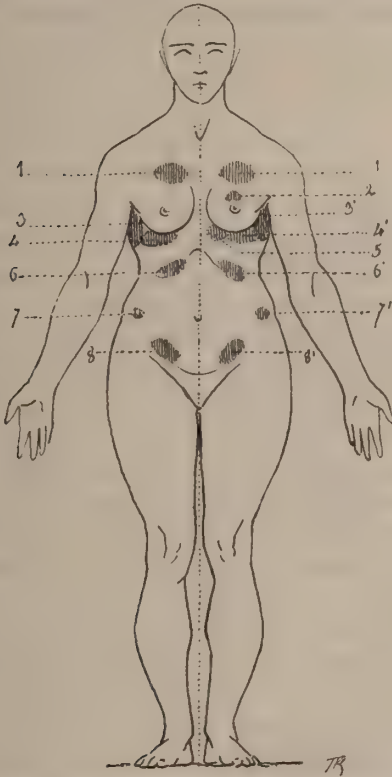


Figure 3. In the course of numerous examinations the "school of Salpêtrière" discovered various hysterogenic zones pressure on which would cause or abort a hysterical convulsion. Eight of these zones are here indicated. Of course they were factitious. We don't see them any more unless we make them.

about his name, realizes that he doesn't remember his past, is curious about his identity and, quickly or slowly, recovers. What has happened? Such a patient has *always* run away from something. For adequate reasons he doesn't abscond or elope or run away in the usual conscious way. He passes into a state of secondary consciousness and in that runs away. The secondary consciousness is his alibi. Hysteria is just that; or just like that. If it happened to suit the purpose of this ambulatory automaton; he might just as well have hysterical blindness or paralysis or fits or vomiting. For instance:

The right arm of a farmer's hard-working faithful wife had suddenly become paralyzed; apparently a stroke. But it wasn't that at all. Some weariness of her unending job; some, possibly well-founded, discontent with her husband; a little domestic friction; a little soreness in the arm; and the paralysis was a temporary way of settling all her difficulties. She didn't have to work, her husband became most affectionate and attentive; the entire family, not to mention neighbors, became solicitous. Life was easy and relatively pleasant.

A young lady of eighteen had lost her *voice* three years before; since then she could speak



Figure 4. Typical hysterical convulsion.

only in a whisper. And during *most of that time* had been making daily visits to a doctor's office for electric treatment. No results. What was the matter? A sensitive girl, a rather difficult situation at home, trouble in school, then a bad cold making her quite hoarse and suggesting loss of voice; and the partial solution of most of her problems by becoming voiceless.

Some years ago, when I was to give a clinic in a distant university, one of the patients supplied for the clinic was a girl of about 20 who had just



Figure 5. Hysterical opisthotonos.

entered the hospital for some sort of convulsions. I concluded the fits were hysterical and told the professor I thought I could make her have one before the class. Now, this young woman had a hare lip and cleft palate. When



brought before the class I questioned her and pretended I could not understand the answers on account of her necessarily imperfect articulation. As this went on she became more and more embarrassed and nervous, her face flushed, she began to breathe irregularly, her hands trembled and twitched, her voice became more uncertain and presently she stiffened out, head retracted, slid from her chair to the floor and had a general convulsion—which naturally terminated the interview. Now, what transpired



Figure 6. *Attitude passionelle*; one of the phases of the classic hysterical fit of Charcot, now very rarely seen.

there had been going on for years. In school the children had mocked and imitated her; the teacher couldn't always understand her. Life was a burden and she had to live. Instead of committing murder or committing suicide, running away or declining to go to school, she took to fits, the fits being as much a behavior reaction as would have been any one of the other solutions of her problem.

The symptoms of hysteria notoriously are polymorphous, manifold, simulating many things. Naturally, they always are factitious. Hence they always are casual and from the patient's standpoint logical; due to his frame of mind. And his frame of mind always is due to his natural constitution plus his lifetime of experience. If a woman has an hysterical fit it is because she has some idea of what a fit is like and has an idea that a fit is the thing to have. Hysterical blindness occurs because for some reason or other blindness is *to the patient* a reasonable thing to happen. If, following slight injury of an arm, a man develops hysterical paralysis of the arm and the doctor carefully

examines sensation, after a bit he is pretty sure to find anesthesia *because* the patient recalls (perhaps unconsciously) that numbness goes with paralysis.

To repeat, the symptoms of hysteria are a behavior reaction, in essence and nature not so different from voting the republican ticket in Chicago, going to church, indulgence in profanity, being afraid to look over a precipice, being uncomfortable with 13 at a table or shouting for help under certain distressing circumstances.

To this audience I need not detail, indeed 'twould take all night to detail the symptoms of hysteria. As you well know they include many sorts of paralysis (but not facial palsy), contractures, tremors, jerkings, local and generalized spasms, catalepsy, narcolepsy, lethargy, trance states, vomiting, impairment of special senses (but not homonymous hemianopia), anesthesia, hyperalgesia, somnambulism, ataxia, anorexia, frequent micturition, retention of urine and myriad other things.

The most sweeping statement to be made about all of these manifestations is that they all are inconsistent with organic disease. Careful and knowing examination always will reveal this. For instance, the unconsciousness of the hysterical fit is only apparent, not real. The most absolute anesthesia does not interfere with accurate automatic use of the affected member. The greatly contracted visual field of hysteria does not cause the patient to bump into objects in going about. Fingers contracted into the palm do not relax with passive flexion of the wrist and tighten with extension.

The anesthesia of hysteria can be shown to have a *sharp* border and this border can be shown to shift in a few minutes. (See Figures 1 and 2.) The same applies to hyperesthetic and tender areas. Why? Because the anesthesia and tenderness are mental and have nothing to do with peripheral nerve supply and our memory of the location of a sensory stimulus is imperfect. This can easily be demonstrated on the normal person.

I ask Dr. Blank to stand with his back to us and I firmly and repeatedly press on a certain vertebral spine and ask him to assume that it is a vertebra injured in an accident and that he is suing for \$20,000. I mark the spot, about the mid-dorsal region with chalk. I now start in the sacral region and successively firmly press over

the spine at about one inch intervals gradually ascending toward the presumptuously exquisitely tender spinous process. The Doctor is to tell me when I press on it. When I am still four inches below it he says "There." In other words he has the tender spot but it is not in the same place.

In the few minutes left to me I can make only a few terse and dogmatic statements regarding treatment. Sort of guide posts.

1. Hysteria being a reaction to maladjustment our job is a. To adjust the patient to his environment. b. Adjust the environment to the

gestible. Notoriously this fact is used in treatment. But we should be careful not to use it to the patient's detriment. Many a hysterical symptom is manufactured by the physician through an indiscreet remark or procedure or by his honest but too obvious perplexity. Hence unnecessarily prolonged or repeated examinations are to be scrupulously avoided.

The effect of repeated examinations was beautifully demonstrated in the time of Charcot when this great neurologist and his assistants at the Salpêtrière were daily studying hysteria in all its phases. The result was a huge number of



Figure 7. Showing how a patient with a violent hysterical seizure was handled in the old days. The method was calculated to prolong the fit and cause its recurrence. Now such a patient is simply let alone; the fit generally is soon over and recurrence is not encouraged.

patient, or, what generally has to be the procedure, c. A combination of a and b.

Readjusting the patient means some process of re-education by means of instruction, suggestion, persuasion, encouragement and reassurance, discipline, occupation, coercion, explanation, even corporal chastisement. In short by some of the thousand and one known educational levers.

2. As the psychology of hysteria is relatively simple, of a juvenile type, the patients are sug-

chronic cases of hysteria with manifold, sometimes violent, manifestations. (See figures 3 to 8.)\* Nowadays, when this meticulous examination has been abandoned and hysterical convulsions are simply ignored, they have few cases and the patients they have quickly recover and leave the hospital.

3. Let us treat the patient for what he has,

\*Taken from *Études sur la Grande Hystérie*. Paul Richer, Paris, 1885.





Figure 8. These six hysterical women were lined up; they were told, to have their picture taken. Then a gong was struck. Instantly they assumed these fixed cataleptic attitudes. Now the sound of a gong has no more direct relation to hysteria than has a mal-placed uterus. But these women had been experimented on with a gong and their reaction was the result of training in the way of repeated investigation. Their cataleptic attitudes were as much a conditioned reflex as was the reaction of Pavlov's trained dogs which at once secreted a flow of saliva when a gong was struck.

not for just what he complains of: in other words make a real diagnosis.

If one goes to a good internist for abdominal pain and vomiting, he doesn't treat those things. He makes an adequate examination, determines the condition, the state of affairs, causing the symptoms. Then maybe he simply regulates one's diet and habits or asks a surgeon to do a gastro-enterostomy or remove the gall bladder.

But a real diagnosis, a real examination, in a case of hysteria means more than a physical going over and decision that the trouble is functional.

A single woman, forty-two years old, had been an invalid and recluse for thirteen years. Before that, from the age of twenty to twenty-eight, she had consulted numerous doctors for various complaints and had received "forty-three varieties" of treatment without benefit. Finally, a doctor told her she must give up her occupation and go back to the farm, which she did, there to continue to suffer as before. Now, it was astonishingly easy to ascertain that the years of suffering and disability were due to foolish ideas concerning onanism. When I asked her if she had told these things to any of the other doctors, she said "they never asked." And when I said "if I hadn't got you to tell me about all these worries, would you have gone away without

saying a word," she replied, "I certainly should." In short, no diagnosis had been made and symptomatic treatment was futile.

I saw in consultation an intelligent woman in the fifties who was undergoing a prolonged "rest cure," with forced feeding, isolation, massage, etc., for "extreme exhaustion," "mental depression," "insomnia," etc. It didn't take more than thirty minutes of logical questioning to ascertain that the whole trouble was terror of tinnitus aurium which for her was buzzing "in the head" and a friend having recently died of a stroke she was momentarily expecting a fatal stroke of paralysis. The diagnosis having been made and explained to her, she got out of bed and cheerily went off to California on a pleasure trip.

In short, the treatment must logically follow a real understanding of the case. A neurosis being a behavior reaction, must be treated as such. Who would give a tonic or a sedative to stop a hobo from tramping and riding blind baggage? And yet, thousands of tons of medicine have been prescribed for disorders as distinctly a behavior reaction as is vagrancy. Did any one ever suggest strychnia or Dr. Bunkem's idiosyncratic tonic to cure the pathologic liar? Are the rest cure and forced feeding good measures against prostitution, removal of the ovaries

a rational remedy for holy rolling and change of climate a panacea for inebriety? If a would-be Napoleon of finance fails and absconds to Canada do we advise massage and stimulating baths? If a man is pestered by a petulant wife, hates his domineering mother-in-law, can't make his business go and consequently has headache, insomnia, dizziness and indigestion, do we give him a barium meal, remove his appendix, straighten his septum, drain his gall bladder and finally give him iron, quinine and strychnia? I am sorry to say, sometimes we do. But we shouldn't.

### OBSERVATIONS ON THE MECHANISM AND ETIOLOGY OF ARTERIAL HYPERTENSION\*

RALPH H. MAJOR, M. D.

From the Department of Internal Medicine, University of  
Kansas School of Medicine,

KANSAS CITY, MO.

The theory that high blood pressure is due to the presence of some metabolite in the blood is by no means a new one, as an examination of the medical literature of the past reveals. George Johnson in 1868 observed that "The minute arteries in any part of the body may be excited to contract by their contents becoming abnormal, and therefore more or less noxious to the tissues." Johnson believed this continued contraction played an important role in the production of the increased arterial pressure and the hypertrophy of the muscular walls of the arteries in various tissues and organs observed in the course of chronic Bright's disease.

Johnson developed these ideas further in a series of papers extending over a period of several years and engaged in a controversy with Gull and Sutton, who advanced the opposing theory of arterio-capillary fibrosis. While Johnson's theory saw the hypertension as primary and the vessel changes as secondary, Gull and Sutton contended that hypertension was the result of an arteriolar fibrosis.

Broadbent, forty years ago, stated that the causes of high arterial tension were increase in the volume of the blood, frequent and powerful contraction of the heart, arteriolar contraction and resistance in the capillaries. In discussing

the effects of arteriolar contraction he observes, "that the most simple example of this is the increased arterial tension which is produced by external cold," and adds that, "every winter, the first spell of cold weather is attended with a number of cases of apoplexy, as is each succeeding one."

Broadbent further expressed his belief that resistance in the capillaries is "the most frequent and important of the causes of arterial tension," and that the cause of this resistance "can scarcely be other than some substance present in the blood which acts directly upon the capillary walls." He adds further that, "the special material which plays this part is almost certainly nitrogenized waste which has not undergone the complete oxidation necessary for elimination." Broadbent emphasizes that diseases showing high arterial tension "are exactly those in which there is the greatest certainty of the existence in the blood of the products of imperfect metabolism," and, calling into play his vast experience in the treatment of cardio-vascular diseases, observed that "the effects of treatment amount almost to a demonstration, eliminants being the great means of removing the resistance in the capillaries and lowering the tension."

These views of Johnson and of Broadbent, expressed fifty-five and forty years ago respectively, have a very "modern" sound. Kahler states that the elevation of the blood pressure may be due to increased work of the heart, increased blood volume or blood viscosity and increased resistance in the peripheral vessels. Von Monakow believes that, "lasting increase in blood pressure is always due to abnormal contraction of arterioles" and also speaks of a "spastic component" concerned in arterial hypertension. Otfried Muller stated that he shares von Monakow's views and that he has observed constriction of capillaries in both nephritic hypertension and in so-called essential (constitutional) hypertension.

The theories of Johnson and of Broadbent awaited the development of adequate chemical methods before their correctness could be either proved or disproved. This development has been particularly rapid during the past few years and has placed at our disposal an armamentarium of blood chemical methods unknown to these earlier investigators.

The observation of Neubauer that certain pa-

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tients with high blood pressure had a hyperglycemia stimulated an extensive investigation on this subject. The majority of observers have found that hyperglycemia does occur in some hypertensives, but agree that as a rule the blood sugar is within normal limits. O'Hare, however, found that when patients with hypertension were tested by the glucose tolerance test, a high percentage showed a lowered tolerance with a hyperglycemia.

Fishberg found that many patients with essential hypertension show an increase of uric acid in the blood. This observation has been repeatedly confirmed in our own experience. While this increase is more striking in patients having a frank nephritis, yet it does occur in hypertensives showing no evidence of renal inadequacy.

The possible role of cholesterol in the production of high blood pressure has been studied by Westphal. He has described a hypercholesterinemia in 70 per cent. of a series of 80 patients. Westphal found that cholesterol increased the sensitiveness of arterial muscle to the action of adrenalin and sees in this the role of an increased blood cholesterol in hypertension. Hülse, however, was unable to find any increased irritability of the blood vessels of hypertonic patients to adrenalin nor was he able to demonstrate any increased irritability of smooth muscle to the blood plasma of patients suffering from hypertension. Hülse found that patients with hypercholesterinemia showed arterial lesions and also observed it in patients with a marked atherosclerosis who had normal blood pressure. He believes there may be a relationship between hypercholesterinemia and atherosclerosis but not between hypercholesterinemia and hypertension.

Thomas has attempted to prove that repeated injections of cholesterol produce arterial hypertension in animals and has published experiments carried out on four rabbits. His protocols, however, show that the highest pressure recorded after repeated injections was only 125 mm. and Tholldte, who carried out a similar set of experiments obtained negative results.

Kylin has made an exhaustive study of the blood calcium and blood potassium in hypertension. He finds in essential hypertension that the blood calcium is lowered and the blood potassium increased. Similar changes were seen in asthma and certain functional neuroses, which

leads him to the view that essential hypertension is primarily a disease of the vegetative nervous system.

All of the above investigations are of interest and importance since they suggest metabolic disturbances in certain hypertensives. The difficulty in considering such disturbances as etiological factors in the production of arterial hypertension is the fact that neither glucose, uric acid nor cholesterol produce any elevation of blood pressure when injected into animals. Further evidence against assigning any specific effect to them is the fact that diseases which show hyperglycemia, as diabetes mellitus, increased blood uric acid, as gout and hypercholesterinemia, such as diabetes, atherosclerosis and lipoid nephrosis, are all frequently present without any elevation in blood pressure.

We have been studying the possible role of the guanidine bases in the production of high blood pressure for the past three years. These substances have a marked pressor effect and it seems at least possible that if they are the products of normal or abnormal metabolism, an increased production or a diminished excretion of them might produce an arterial hypertension.

The method of approaching this problem consists obviously in studying the blood and urine content of these guanidine bases in patients with normal blood pressure and in patients with hypertension. If we can demonstrate an increase of guanidine in the blood of patients suffering from hypertension or a decreased output in the urine as compared with normal individuals, then the relationship between guanidine and high blood pressure seems probable.

The quantitative methods for the estimation of guanidine in the body fluids have been until quite recently extremely complicated and possibly unreliable. The work of Tiegs and of Marston has, however, pointed the way to a colorimetric method for estimating guanidine.

We have recently employed a colorimetric method based upon Tiegs' observation that sodium nitroprusside produces in an alkaline solution an intense red color with guanidine compounds. The details of this method have been published elsewhere and the method consists essentially in precipitating the blood, as in the Folin-Wu procedure, evaporating to dryness, extracting with absolute alcohol, evaporating the

alcoholic extract to dryness, then taking it up in water and adding to this aqueous solution the nitroprusside reagent. This reagent consists of equal parts of a 10 per cent. solution each of sodium nitroprusside, potassium ferricyanide and sodium hydroxide diluted with four volumes of water. This reagent produces color in an aqueous solution as dilute as 1 part of methyl guanidine to 200,000 parts of water, and while this color is not specific for guanidine, guanidine gives ten times as much color as creatin, two hundred times as much color as urea and four hundred and fifty times as much color as produced by creatinin.

This colorimetric method was applied first to a study of the blood of individuals with normal blood pressures. The results obtained in a series of patients with arterial hypertension showed that most of this group showed a blood "guanidine" higher than normal.

While this method showed a difference in the color reaction in many hypertensives, yet it was not an entirely satisfactory procedure, since the color changes were not sometimes as sharp or clear cut as desired and also since we could not read a value lower than 0.2 mgm. per 100 cc.

A recent modification of this method suggested by Weber appears to overcome this difficulty. This newer method has an additional procedure which was suggested by the observation that blood charcoal in an alkaline solution absorbs guanidine and later releases it in an acid alcoholic solution. This method gives a clear solution for reading and a large series of tests have shown that when known amounts of guanidine are added to the blood, the average recovery is 85 per cent. and in many experiments 100 per cent.

The results obtained in a series of patients with normal blood pressure showed an average value of 0.11 mgm. per 100 cc., lower than by the older method. In a series of hypertensives whose blood was studied by the newer method, we found higher values (0.2 mgm. to 0.4 mgm.) than in normal controls.

The difference between the normal values and those of hypertension in both series of examinations may however impress one as being very slight and of probably little importance. We next studied the blood of dogs in whom an elevation of blood pressure was produced by the injection of guanidine compounds. Up to date, six

such experiments have been performed, all with similar findings. These experiments show that the blood of a normal dog contains approximately as much "guanidine" as that of a man and that a sustained elevation in blood pressure follows the injection of amounts of guanidine causing increases in blood guanidine no higher than those observed in hypertension.

The color reaction with which we are working is not specific for guanidine, and we have no proof that the reaction we obtain in the blood is due to guanidine. It is highly possible, however. The color reaction is not due to sugar, uric acid or cholesterol, which may be increased in hypertension, since these substances produce no color with the reagent, and also because the patients showing high "guanidine" values have no increase in the blood sugar, uric acid or cholesterol. It is not produced by urea or creatinin, since these substances produce too little color, and it can scarcely be due to creatin, since the color can still be obtained in the filtrate after autoclaving with acid has converted the creatin into creatinin.

We conclude from the above observations that many patients with essential hypertension show in the blood by the colorimetric method something which is increased in amount and which gives the same color with the reagent as guanidine compounds. The increase, while not marked, is definite and is probably sufficient, if produced by guanidine, to elevate the blood pressure.

The results of the blood estimations in chronic nephritis are of interest. We have studied the blood of ten patients suffering from chronic nephritis with nitrogen retention and in all of them have found great increases in the color obtained. Four of these patients were in uremia and showed blood "guanidine" varying from 1 mgm. to 3 mgm. per 100 cc.—values from ten to thirty times the normal. When the guanidine blood values in dogs reach this height, as the result of injecting guanidine, the animals often show marked tremors or convulsions. This suggests that if the increased color reaction in patients with uremia is due to an increase in guanidine, then the guanidine compounds are present in sufficient amounts to cause toxic effects.

The proof that the color reaction produced in



the blood is due to guanidine is very difficult, if not impossible to obtain. The separation of such small amounts as our method suggests, in the presence of much larger amounts of creatin and creatinin, is an extremely complicated chemical problem, particularly because of the danger of oxidizing creatin or creatinin into methyl guanidine.

A similar difficulty is encountered when we attempt to extract from the urine what are probably small amounts of guanidine, in the presence of large amounts of creatinin. Recently much doubt has been cast upon the reliability of previous methods for the isolation of guanidine in the urine, it being suggested that the guanidine found was formed from the creatinin present. The evidence, however, that guanidine is normally present in the urine is quite as good as the evidence against its presence, and normal urine, when studied by a modification of the colorimetric method, shows a color reaction which is not due to creatinin or creatin.

We know that guanidine-amino-caproic acid or arginin is absorbed continually from the intestine. We know also that methyl guanidine acetic acid or creatin is present in the blood and in the muscles and that its anhydride, creatinin, is present in the urine and possibly in the blood. It would seem perhaps more than a pious wish to expect guanidine itself—the nucleus as it were of these substances and of many proteins—to be a metabolite, whose disturbed metabolism would lead to disease.

The definite proof that certain types of hypertension are due to a perversion of metabolism, will require a great deal of proof, both direct and indirect. Such work is and has been laborious, time consuming and necessitates the most careful experimentation and even a more careful drawing of conclusions. Investigations of this type are, however, very obviously necessary. Hypertension is one of the greatest scourges of our present day civilization. The first step towards its control consists in a thorough understanding of the various types and clearer ideas regarding its causation.

#### DISCUSSION

Dr. Nathan S. Davis III, Chicago: There is very little that can be added to this excellent presentation of the subject.

I have been for some time thoroughly in agreement with the work Dr. Major has been doing and

have felt that we had some pressor substance that primarily caused a spastic condition of the arterioles and arteries as a basis in the hypertension; and that as a result of this your arterial changes take place and you get the arteriosclerosis.

Of the substances that have been experimented with it seems to me that guanidine was the one that was most apt to be the substance in question because of the more prolonged pressor effect that it gave. In some cases that Dr. Major reported a year or two ago he got an increased amount of guanidine excreted through the urine when the blood pressure was falling. This seemed to indicate there might be an increase in the blood as well.

He recently described a method for isolating a substance probably guanidine in the blood.

During the last two or three months we have been making some of these tests on cases seen in the Northwestern Dispensary.

This is just a short series of cases in our dispensary patients and all of them ambulatory cases.

Dr. Robert W. Keeton, Chicago: My interest in hypertension is not a primary one; it is only a secondary one because of my interest in related fields. It has always struck me as very significant that there is only one type of hypertension that can be relieved or helped materially by any method that we have at hand.

There is a class of patients all overweight showing varying degrees of obesity, of which women constitute a large percentage. These people in the absence of definite arteriosclerosis almost without exception obtain relief from a simple reduction in the total caloric intake. In other words if you put these people on a diet which reduces their obesity their blood pressure falls.

It is not necessary in these cases to restrict the protein. That is, we may give of proteins sometimes as much as 95 to 100 grams per day and still the blood pressure falls. I have recently reviewed the records of my obesity cases and I find a few in which the systolic pressures have dropped from 260 m.m. and 240 m.m. to 140 m.m. and have remained at that level for over a year. There are a large number in which the pressures have dropped from 190 to 160 or 140; others in which it has gone from 160 to 130. There has been a corresponding lowering of the diastolic pressure. I have considered that in placing these patients on a reducing diet I was firing their furnaces in such a way as to produce a hot fire, which would burn cleanly and destroy any products of incomplete oxidation. Whether such hypothetical products of incomplete oxidation are guanidine derivatives I am unable to say. So frankly I am interested not so much in the protein origin of the theoretical toxin as in the lipid origin.

In this connection I should like to speak briefly of the arteriosclerotic type of diabetes. These people show the physical findings of arteriosclerosis, the blood chemistry shows an increase in the cholesterol and at the post mortem table the vessels show calcium soaps in their walls. When there is such evidence of

Case	Race	Sex	Age	Date	Blood				Wass.	Urine		PSP		S.B.P. Range
					S.B.P.	D.B.P.	Gu.	N.P.N.		Alb.	Casts	1st	2nd	
N. E. N.	W.	M.	52	3/2	162	90	.74	..	.....	0	0	..	..	190-152
C. A.	C.	F.	52	4/20	160	70	.56	..	++++	+	H	..	..	220-160
G. C.	C.	F.	47	3/2	180	120	.75	45	neg.	0	0	..	..	180-180
F. C.	W.	F.	34	4/19	185	120	.72	35	neg.	+	0	60	15	220-170
G. F.	C.	M.	78	3/18	180	120	.48	..	neg.	+	++	27	18	218-135
C. C.	C.	F.	50	4/19	180	110	.64	40	neg.	+	0	19	15	190-130
D. D.	C.	F.	71	3/9	197	110	.61	..	neg.	0	+	54	25	197-195
E. K.	W.	F.	32	3/8	174	110	.90	36	neg.	+	H&G	..	..	180-170
W. M.	W.	M.	73	3/5	170	93	.71	50	neg.	++	++	30	37	220-170
H. M.	C.	F.	49	3/1	270	120	.93	33	neg.	0	0	55	15	290-202
				4/12	220	120	.48	37	neg.					
G. M.	C.	M.	40	3/31	106	78	.46	..	neg.	0	0	..	..	108+
R. S.	C.	M.	36	4/12	190	148	.48	36	neg.	+++	0	..	..	190-165
J. H.	W.	F.	57	3/31	160	110	.56	35	neg.	+	H&G	51	15	200-120
J. S.	W.	M.	52	3/7	170	90	.32	..	neg.	0	0	..	..	170-165
M. S.	C.	F.	62	4/19	184	110	.48	..	neg.	+	+	..	..	200-164
A. K.	W.	F.	60	4/19	224	130	.84	60	neg.	+	0	0	35	280-200

a dyscrasia in the lipid metabolism, it is hard to neglect it. I have recently studied such a case of diabetes. I adopted the hypothesis that if this man were given insulin to the limit of his tolerance this effect on the carbohydrate metabolism should react beneficially on the lipid metabolism. He was de-sugarized rather readily by diet adjustment and then the albumin output as well as the nitrogen partition was studied over a considerable period. The patient was asked to make note of the night pains which he had in his legs. Then he was studied in a second period in which the insulin was given up to the limit of his tolerance although the urine was sugar free prior to the giving of insulin. During this period he stated that he was much more comfortable. He rested better at night. His urine showed a sharp reduction in the output of albumin. Again I wish to emphasize that these experiences make me wonder whether it is not time to get away from the idea of a protein origin of the hypertension toxin.

Dr. Jacob Meyer, Chicago: May I say that if Professor Major's work is to stand, that we now have a means of differentiating between the so-called essential hypertension and other forms of hypertension. We understand by essential hypertension a condition of high blood pressure in which there is no demonstrable evidence of renal disease, and in which the urinary function and blood chemistry is normal. Heretofore no attention has been paid to the xanthin bodies and Dr. Major's work is important from the view of etiology.

If we are to assume that essential hypertension is due to vascular spasm one would ask whether guanidine produces vascular spasm *in vitro*. I should also like to know whether Dr. Major has followed the blood chemistry with reference to guanidine, in cases of essential hypertension which subsequently passed over to the malignant hypertension type.

Dr. Charles L. Mix, Chicago: I would like to ask Professor Major whether he has paid very much attention to diastolic pressure.

We have observed clinically (I mean physicians in

general) that the cases of high diastolic pressure are the bad cases. They are the cases in which the heart cannot rest between beats. The heart wears out. All of the nephritic cases belong to this group, and also cases with marked cardiac hypertrophy. There is another group of cases in which the systolic blood pressure is very high, even up to 270 mm. of Hg., but with a diastolic pressure of only 80 or 90 mm. I had one the other day showing 220 mm. systolic and 80 mm. diastolic. The latter cases fool you. When you feel the pulse you have the sensation of a low blood pressure, almost a pulsus vacuus. When you feel the pulses of the former you have the sensation of a high blood pressure, because as a rule such patients have a pulsus magnus. I would like to know whether Dr. Major has paid attention to the clinical side of cases of hypertension in reference to his clinical guanadin determinations and whether he has noted any difference between high diastolics and low diastolics with reference to the total amount of guanadin found.

It would seem to me that is a matter of considerable importance. I would expect that the guanadin would be much higher in the high diastolics and lower in the low diastolics, and that the diastolic would be of greater value in the elucidation of the problem than the systolic pressure.

Dr. Frank Deneen, Bloomington: For the past year and a half I have been following the cases along the method that Dr. Major has advised, and have been trying to follow his method of treatment. And I want to say that the subjective results in patients are very gratifying and much more so than I ever obtained before.

The decrease in blood pressure has not been in proportion to the great improvement in the subjective symptoms. By the end of about the third injection of his liver extract the patients rest and feel better and they sleep better and they are able to go about their daily routine in a much more efficient manner.

Dr. Ralph Major, Kansas City (closing): I wish



to thank the gentlemen for the discussion. I do not want to detain you very long. I am personally very anxious to hear the other papers.

I am much interested that Dr. Davis found the same increase in blood we did. I think his average is probably a little higher. He is probably dealing with more severe types than we are.

I was very much interested in what Dr. Keeton said. When we get a fat hypertensive I reach out both hands to welcome him. When I get a thin one I don't feel badly when he goes to some other doctor.

However, I have a feeling that in these fat individuals we are dealing to a certain extent with a mechanical problem.

Dr. Beall read a paper in Washington several years ago in which he pointed out the fact that if a man increased his body weight ten pounds he increased his capillary bed six miles. That may explain it.

We have not had the opportunity of following these guanidine readings in patients through transition to the malignant thyroid stage of hypertension. We have been working at this a comparatively short time and there are a great many things we do not know about. These are problems which we are going to attack.

I was very much interested in what Dr. Mix said and agree with him fully as to the great value of diastolic pressure. Most of our striking increases have been obtained in patients with high diastolic pressure.

I wish to thank Dr. Deneen for his very generous discussion. He brought out a question which I shall not attempt to take up because it takes up certain things not considered in the discussion of the paper.

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## SOME UNUSUAL CASES OF PROTEIN SENSITIZATION\*

SAMUEL J. TAUB, M. D.

Associate in Medicine, Northwestern University Medical School  
Attending Staff, Cook County Hospital and Washington Park Community Hospital

CHICAGO

It is now generally accepted that many diseases are caused by sensitization of the body to some protein, either epidermal, furs, food, pollen, bacterial and a miscellaneous group such as orris root, pyrethrum and kapok.

We know that sensitization to one or more of these proteins may cause asthma, hay fever, urticaria, eczema and possibly migraine and epilepsy. This sensitization or hypersensitiveness, is determined by dissolving the suspected protein extract on a scratch in the epidermis or by injecting a small amount of the dissolved protein intradermally. A positive test consists of an urticarial wheal, or at times an erythema, occurring usually within 5 to 30 minutes. There are many substances causing this hypersensitiveness and the majority of these we are all well acquainted with, but occasionally there occurs a manifestation of allergy the cause of which is so unusual and so unexpected as to be of especial interest. I wish to present two such cases that fall in this category.

Case No. 1. Mr. J. P., aged 38 years, single, white, entered the Asthma Clinic of Northwestern University Medical School, February 10, 1925, complaining of dyspnea, orthopnea, wheezing and cough which began five years ago. Dyspnea and wheezing come on in attacks, usually at night and last several hours. Lately attacks come on every night and last from eight to fifteen hours. He has been unable to work for the past five years.

Past history and family history are negative.

Occupation—breeds canaries in his home.

Physical examination is essentially negative except for marked wheezing rales all over the chest and prolonged and difficult expiration. Fluoroscopy of the chest is practically negative. Repeated sputum exami-

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nations were negative for tuberculosis. A diagnosis of bronchial asthma was made and skin tests started.

A marked positive reaction to canary feathers protein was obtained. Smaller reactions were obtained to some of the other feather group such as, chicken feathers, turkey feathers, goose feathers, pigeon feathers and duck feathers. The pillows were examined and found to contain chicken, duck, goose, pigeon and turkey feathers. These were eliminated from the pillows and he was advised to avoid contact with the canaries. It was impossible for him to avoid contact with the birds because he lived in the same room and was unable to move.

Desensitization with canary feathers was started and after a few injections, attacks would come on at longer intervals and were less severe. However, in spite of all treatment he continued to have slight attacks of difficult breathing lasting about five minutes every three or four weeks, probably because of his unavoidable contact with canaries, living in the same quarters, although he does not handle them. By eliminating all the other sources of sensitization it has been quite definitely proven that canary feather is the most important factor in this case. This is an illustration of a rather unusual case of hypersensitiveness and also emphasizes that avoidance of contact with the offending protein is the most important procedure in the management of the asthmatic.

Case No. 2. Miss B. D., aged 28 years, single, white, complained of an extensive scaly weeping eruption all over the body, including the scalp and a worse eruption on the folds of the skin. Itching is extreme especially at night. This eruption first appeared when she was six months old and has been present ever since. At times it would be better only to reappear again. She has been unable to work because of the appearance of her face and hands.

Past History—measles, chickenpox, scarlet fever, pneumonia, whooping cough, bronchitis in childhood; urticaria and prickly heat in infancy.

Family History—essentially negative.

Physical examination is negative except for the extensive eczema practically all over the body.

Previous Treatment: Patient has been treated by various skin specialists without results and entered the Clinic January 31, 1927, to be skin tested.

Skin tests were made on the anterior surface of the thighs as all other areas were unavailable because of the extensive eczema. The tests included all the common foods, epidermal proteins and some miscellaneous substances totalling in all about 200 with negative results. In the face of negative tests to the common proteins, a few unusual proteins were tried with the result that a markedly positive reaction to silk was obtained. This is the only protein to which this patient has shown any positive reaction.

The patient was requested to discard all silk clothing and immediate improvement was noticed. After one week, the itching stopped and the eczema began improving considerably. The patient, however, was dissatisfied with the wearing of cotton garments and was anxious to have an attempt made to be desensi-

tized to silk. March 25, desensitization was started with silk 1:10,000, .05 cc. per hypo—given three times a week and increasing the dose by 0.05 cc. each injection. For the first few doses the amounts were not increased because of marked local reactions obtained—being extremely sensitive to silk.

At the present time, considering the short period of treatment, there is a marked improvement in the condition of the skin of this patient. A still greater improvement is expected with further treatment. She is getting 0.6 cc. of 1:5,000 dilution. Sensitization to silk is so strong in this case that some patches of eczema would not disappear from the dorsum of the hands and it was found that there was some silk lining on the inside of the pocket flaps which she would come in contact with. After these pieces were removed the eruption on the hands cleared up.

These cases illustrate the importance of considering other than common substances as causes of allergic disease and of being constantly on the alert for new developments in this rapidly progressing field of medicine.

55 E. Washington St.

#### CONGENITAL PYLORIC STENOSIS\*

ALBERT H. BURR, M. D.,

DIXON, ILL.

Our subject is a very interesting and important one for numerous reasons; chief among which we call your attention to the increasing frequency of its recognition as a menace to infant life, much greater than was formerly apprehended, and also to the rapidly growing statistics of successful surgical relief from that domestic tragedy of fatal starvation in the newborn.

It is of serious import to the family physician who is the first to encounter this ailment under many aliases such as, malnutrition, marasmus, inanition, gastritis, catarrh of the stomach, disagreement of mother's milk, etc., which often leads to a prolonged but futile search for some kind of food, or diet formula, or plan of feeding that will agree with the stomach of a ravenously hungry babe, dying by inches because nature has interposed a more or less complete hypertrophic pyloric obstruction to the passage of food, which spells the little victim's doom except for a correct diagnosis and timely operation.

At this juncture the abdominal surgeon becomes of vital importance to carry out a simple, effective operation which during the last five

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years has reduced the life risk almost to the vanishing point.

Like all else in medicine this pathologic condition has its historic genesis. The credit of having made the first necropsy report of congenital pyloric stenosis belongs to Geo. Armstrong<sup>1</sup>, of London, Eng., in 1771. A few years later (1788) Hezekiah Beardsley of Connecticut made the first autopsy report in America of what he termed "Schirrus of the pylorus in an infant." Hirschsprung, a century later (1887) made his noted presentation of two cases before the German Society of Pediatricists. At the close of the last century Thomason was able to collect only fifteen cases from existing literature. About the same time Osler's Text-Book on Medicine (3rd), dismisses the subject with little less than ten lines.

The increasing frequency of the diagnosis of this condition in the first decade of this century and the dangers of gastroenterostomy in subjects so young which was almost universally fatal, led Dr. Pierre Fredet of France at the Congress of Gynecology, Obstetrics and Pediatrics in September, 1910, to suggest the section through the circular muscles of the pylorus down to the mucous membrane. Dr. C. Rammstedt of Germany was the first to carry out this suggestion with a successful operation reported in the Med. Klinik for 1912. Hence the name, Fredet-Rammstedt operation which for its simplicity, efficiency, and safety, is preferred above all other surgical methods and has placed its authors' names among the immortals.

We shall not discuss the mooted points of etiology, or the differentials between pyloric stenosis and pyloro-spasm or the merits of medical versus surgical treatment. We are passing through a controversial stage with this subject similar to that of a generation ago with appendicitis. We believe we shall also reach the same conclusion, that it is a medico-surgical question calling for co-operative team work, for the best results.

The object of this paper is to appeal to the family physician for a more critical examination of every infant presenting two obvious symptoms, viz; persistent projectile vomiting soon after nursing and a progressive loss in weight. These two signs should arouse the doctor's suspicion and cause him to expose the abdomen and watch

for a third visible and graphic sign, the peristaltic wave.

This begins at the cardiac end of the stomach as a dome shaped tumor traveling across the median line and vanishing as it reaches the pylorus, to be followed in turn by successive rhythmic waves. If this is manifest he will have an impressive moving picture on a living screen, which needs no printed lines to interpret its significance, for these three cardinal signs have clinched his diagnosis. All others are simply confirmatory. A pyloric tumor may, or may not, be palpable. Fluoroscopic or x-ray examinations are interesting but non-essentials. They are time consuming, add to expense and in the country are not always available. They can only verify what has already been discovered.

The problem now becomes a medico-surgical one. It is not a question of what *kind* of food may agree with the infant stomach. The essential thing is to get sufficient nutriment through an obstructed passage to satisfy the demands for the repair and growth of an otherwise normal infant.

This condition usually manifests itself during the second or third week from birth. It occurs for unknown reasons, largely among first-born males. A loss of 20 per cent of the birth weight approaches the danger line. A loss of 25 per cent admits of no delay in operating.

The writer has reviewed the current literature of the last three years on this subject filed in the library department of the A. M. A., and wishes to present briefly a few illuminating abstracts to emphasize the rapid increase in the number of cases operated on, the steady reduction in mortality following operation and the necessity for greater vigilance on the part of the country physicians in a timely recognition of this ailment.

Dr. Richard W. Bolin<sup>2</sup> before the A. M. A. at Atlantic City in 1925 presented a study of 454 cases operated on by the Fredet-Rammstedt method. Of these 257 were done by Wm. A. Downs and 197 by himself during a period of ten years. In this entire series the mortality was 15 per cent. In the last 130 cases from Jan. 1, 1923 to Apr. 1, 1925, it was reduced to 8.5 per cent. He concluded that this method of operating was curative, results permanent, and that its "so-called mortality was largely due to delay either in diagnosis or in operating."

Heil of Germany<sup>3</sup> reported 42 cases operated on by him with but one death, 2.3 per cent.

Basil Hughes, surgeon to Bradford Municipal Hospital<sup>4</sup>, England, in reporting 45 consecutive Rammstedt operations done by himself, (42 males and 3 females), up to May, 1922, said, "There is growing evidence to show that this condition is of far more frequent occurrence than is generally imagined," and that 8 of his series were diagnosed as "marasmus, inanition, breast trouble, etc." His mortality rate was 30 per cent. Since 1922 the mortality following this operation has been reduced almost to the vanishing point.

Strauss and Abt<sup>5</sup> report 221 cases in their service in Michael Reese and the Chicago Lying-in Hospitals with a death rate of 3.22 per cent. All were confirmed by the fluoroscope and operated on by the Rammstedt method modified by the pylorplastic flap of Strauss to which they attribute improved results, together with pre-operative and post-operative injections of glucose in normal saline solutions.

J. G. Eblin<sup>6</sup> in a brief paper says, "In recent years reports of cases are of frequent occurrence, but it is evident that an immense number of infants have gone on to a fatal termination with the condition undiagnosed."

Alonzo Weeks, U. of Calif., in *International Clinics*, writes, "This subject deserves to be brought up from time to time because there can be no doubt that congenital pyloric stenosis is over-looked in a great number of cases. It has been demonstrated that about 3 per cent. of babies needing a doctor's attention in the large clinics and in the practice of busy pediatricians suffer with this condition, yet, throughout the country very few cases are being reported in medical literature. These patients are repeatedly brought in after being treated from one to three weeks, for malnutrition, food not agreeing with them, trouble with mother's milk, etc., when, if the family physician was on the alert, the diagnosis would be easy and if surgery were resorted to early enough—recovery should be 100 per cent."

If any one thinks these statements are over-drawn, we suggest an examination of the death certificates of infants under four months, on file in the office of his County Clerk, as the writer

has done in Lee County, covering the years 1924 to 1926 inclusive, and note the surprising number of deaths attributed to malnutrition, marasmus, inanition, vomiting from birth, "no food agreeing with it," etc. We found that 60 per cent of these deaths in Lee County were certified as having died from such so-called causes and sent to the cemetery misbranded. No doubt these conditions existed but these are not diseases. They are only the symptoms or effects produced by the essential cause of death. Such terms on a death certificate are as meaningless as death from heart failure, lack of breath, coma, and dropsy. They should be rejected as inadequate. Has congenital pyloric stenosis suddenly increased during the past quarter of a century? It is inconceivable. The truth is, that, like appendicitis in former days under a faulty diagnosis, it has not been recognized.

The author wishes to place on record a recent case which seems to confirm certain hereditary factors observed by some writers as having a possible etiological bearing upon this strange ailment. R. L. Pitfield<sup>7</sup> reported ten cases all born of parents, one of whom was decidedly neurotic. He believes an inherited nervous imbalance is expressed by pylorospasm in the child which may cause hypertrophy in the muscles of the pyloric sphincter. In four families he observed a combination of an athletic father and a neurotic mother. In these families there were five infants with pyloric obstruction.

Donald B. came under our care Feb. 1, 1927; age 4 weeks, 3 days; birth normal; wt. 8 lbs; well developed; parents of vigorous physique; father professor of chemistry in High School, football coach, physical director of Y.M.C.A. and a fine athlete; mother graduate of university, Department of Music, highly temperamental, of emotional type.

Child's wt. now, 6 lbs. 9 oz., temp. norm., appears bright, has been bottle fed from birth.

Has had ejaculatory vomiting about two weeks with progressive loss of wt. from birth; apparently free from pain and ravenously hungry. An inspection of the abdomen revealed the peristaltic wave. This confirmed our suspicion of pyloric obstruction, which was supported by the fluoroscopic examination. A successful Rammstedt was done by our colleague, Dr. K. B. Segner, with relief at once from distressing vomiting. On the third day, three voluntary normal stools were passed. Patient left the hospital on eighth day weighing 6 lbs. From this time gain in weight pro-



gressed steadily and at 5 months it weighed 12 lbs. and 4 oz.

#### CONCLUSIONS

1. The incident of congenital pyloric stenosis is far more frequent as a cause of death in the new born than formerly imagined.

2. A more critical examination is urged in the case of every infant having persistent projectile vomiting and a progressive loss of weight. An inspection of the abdomen after nursing or taking water should be made for a third symptom, the peristaltic wave. If present, the diagnosis of pyloric stenosis is complete.

3. The medical treatment alone is uncertain, protracted and has a high mortality.

4. The combined medico-surgical treatment by the Ramstedt method is eminently certain, relief speedy and mortality almost negligible.

5. Inanition, marasmus, and malnutrition are misnomers on a certificate as causes of death. They are equivalent to a confession of ignorance of the real cause of which they are the symptomatic effects only. Such certificates should not be adequate for burial permits.

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#### A SERVICEABLE ABDOMINAL ANUS\*

CHARLES J. DRUECK, M. D.,  
CHICAGO

One of the fundamental surgical principles involved in the treatment of diseased or injured tissues is that physiological rest and immobilization is a most valuable therapeutic agent. Unfortunately, many organs, which would be benefited by complete suspension of activity, are so vital to life that complete rest is impossible. The colon, however, can be completely excluded from functional activity, and in the treatment of various pathological conditions which affect it and which cannot be relieved by medical treatment can be cured by placing a stoma cephalad to the infection. The prolongation of life and increased

comfort in incurable conditions of the colon, and complete relief from many infective diseases of the large bowel made possible only by colostomy, is evidenced by its increasing employment in recent years. While colostomy is a surgical procedure, its employment in the treatment of colonic disease offers much promise to the internist in the successful treatment of diseases of the large intestine.

There is a widespread misconception as to the inconveniences and discomforts of a colostomy, a dread which is unfortunate and unwarranted. In most cases we can assure our patient such adequate control that, except in the most favorable high lying growths I do not recommend further surgery to reestablish the continuity of the rectum with the anal canal. A properly constructed artificial anus with a long sigmoidal loop in which the feces collect and give the patient warning that a bowel movement is imminent is intended as a permanent relief of the obstruction of the lower bowel and is not a makeshift for the prolongation of life. It must obviate the uncontrollable discharge of feces and flatus and the painful dermatitis in the neighborhood of the exposed mucosa. Such an artificial anus need not necessarily make the individual's remaining life one of isolation from his fellow men; but we must frankly admit that no orifice yet devised will control the outflow of the intestinal contents when the material is thin and the peristalsis is exaggerated. Cancer is the most frequent indication for colostomy but to be of greatest help the stoma must be established at the earliest possible moment after the tumor is discovered to be inoperable. It is not of value when the patient is moribund.

*Locating the Sigmoidostomy.* Various sites have been recommended for the location of the artificial anus, but the point of election must vary somewhat with the roentgenologic findings and finally with the intra-abdominal examination through the laparotomy wound. Unless there are special reasons for other locations I prefer locating the sigmoidostomy in the lower left quadrant in an incision which splits the fibers of the left rectus muscle because this incision is very serviceable for a full abdominal and pelvis exploration and it may well be used for the artificial anus without disfiguring the patient with a second abdominal scar. With the new anus in

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this location the individual may sit upon an ordinary toilet seat with a basin beneath the stoma and relieve himself with little or no trouble. The parts can also be easily cleansed.

*Surgical Anatomy of the Colostomy.* In the technic of a colostomy operation the skin, fascias and muscles are cautiously handled by most surgeons but the circulatory and nervous supplies of the abdominal walls are sometimes neglected.

The inferior epigastric artery branches off from the external iliac at the internal abdominal ring and passes upward in front of the linea semicircularis between the posterior surface of the rectus muscle and the posterior lamella of its sheath, and finally sinks into the substance of the rectus above the level of the umbilicus. It anastomoses above with the superior epigastric but has very limited anastomoses below the umbilicus.

The intercostal nerves from the 6th to the 12th inclusive give off delicate rami musculares to the rectus muscle and the iliohypogastric which arises from the lumbar nerve sends its cutaneous branches to the lower portion of the rectus abdominus and to the skin of the hypogastric region. The iliohypogastric is the chief nerve supply of the lower half of the anterior sheath of the rectus.

There is very little collateral circulation for the inferior epigastric artery below the level of the navel, and there is practically no anastomosing between the intercostal and the iliohypogastric nerves in the rectus muscle or its sheaths. Therefore cutting of these trophic communications interferes with the subsequent nutrition and the muscle and fascias lose their tone. The artificial anus then becomes patulous instead of being sphincteric and herniation of the bowel through the abdominal stoma ensues. Many ingenious technics have been devised for handling the spur of the bowel so as to prevent this prolapse but obviously none can be effective if the fascias and muscles are atrophic and flabby.

*Functional Results of the Artificial Anus.* There are two structural conditions requisite for a serviceable colostomy.

1. The abdominal anus must be controllable.
2. All feces must be prevented from reaching the diseased area.

Unless these two requisites are constantly borne in mind during the operation, the surgeon

will find he has made a fecal fistula believing he was establishing an artificial anus; and his patient will suffer all the disadvantages without obtaining the benefits of a colostomy. The feces will be discharged upon the skin but will also pass along the deeper (mesenteric) portion of the exposed knuckle of bowel into the gut below.

In planning a colostomy it is essential that there be free exit of the feces as well as a blocking of its progress into the bowel below, and that the stoma be so placed that it will not interfere with the re-establishment of the normal fecal current later whenever that may be desired.

If we search for the causes of the unsatisfactory functioning of colostomies that have been properly constructed surgically and which afford good fecal passage, we find that due consideration has not been bestowed upon the physiological conditions in the intestinal tract.

The commonest cause of the persisting discomfort in colostomies with a sufficient lumen and which have been done on account of inoperable tumors is a reflex spastic obstipation which is repeatedly occurring elsewhere throughout the alimentary canal. Neumann has shown that the wall of the intestine is able to convey an irritation in a centripetal direction even when a short portion of the intestine itself is deprived of its mesentery; and, further, that the irritation first progresses for a short distance in the wall of the intestine and is only then transmitted to the centripetal nerves of the mesentery; and that in a complete section of the intestine the aboral parts become insensitive, while the sensitiveness of the oral parts is preserved. These circumstances furnish an explanation of the further duration of the spastic phenomena in the upper intestinal canal in the case of tumors of the pelvic bowel, if the colostomy has been performed high above the site of the neoplasm, and if the intestine has not been completely severed. In such cases irritation which starts from the tumor proceeds in the centripetal direction, and has a sufficiently long course to travel before reaching the colostomy to pass into the nerves of the mesentery and there to set up a further irritation, or, in incomplete section of the intestinal wall, the stimulus may pass along the undivided portion of the bowel wall to the oral part and from there to the nerves of the mesentery. The physiologically correct colostomy is not only a mechanical aid



but also eliminates the irritating reflex influence of the tumor on the other parts of the alimentary canal and must be performed immediately above the tumor, and also the intestine must be completely severed.

The sympathetic nerve supply of the bowel is somewhat segmental and each portion of the gut has a potential sphincter control; so that when a segment becomes terminal by operative procedure a functional change gradually occurs and there is a slowing up of the fecal current as it approaches the end of the bowel. This change permits the individual with a stoma to reassume control. Jentzer emphasizes the functional adaptation which transforms the colostomy in time into a continent, sphincter-like opening. The microscope in a case described by him revealed the hypertrophy of the different layers forming the artificial anus, which had been perfectly continent for five years.

*What Anesthetic for the Colostomy?* The method of anesthesia for the performance of colostomies is an important matter to decide. The dread of a general anesthesia is almost universal, and moreover, individuals suffering from chronic colonic disease are not, as a rule, ideal patients for abdominal surgery. They are usually debilitated and suffering from disturbed nutrition, their resistance is so much reduced, and they all suffer in a variable degree with chronic intestinal obstruction and perhaps with the acute obstruction; only the simplest technic is warrantable. They are so very prone to complications resulting from ether anesthesia, that if complete surgical narcosis is deemed necessary I much prefer the use of gas and oxygen combined with local anesthesia. Most of my colostomies are carried out with the use of local regional anesthesia produced by the infiltration of  $\frac{1}{2}$  per cent. solution of Butyn.

When the abdomen is opened, its contents carefully examined, and the colonic lesion located, a portion of the bowel well above the disease is delivered out of the wound. The sigmoid and colon are recognized by the longitudinal muscular bands, the epiploicae and the sacculated form of the gut. The transverse colon may perhaps be so prolapsed as to be mistaken for the sigmoid unless carefully examined. The operator must be quite positive about this relationship as

otherwise if there is a long slack mesocolon the portion of the bowel brought out and opened may be twisted upon itself and complications may occur later because of this. Should any difficulty be experienced in locating the sigmoid, the surgeon will pass two fingers into the wound, then follow the abdominal peritoneum outward toward the left iliac fossa, then turn the hand and follow the parietal peritoneum inward over the pelvic floor towards the middle line. In this maneuver the entire peritoneal surface is traced and the first portion of visceral peritoneum reached will be the mesosigmoid. As soon as the fingers leave the parietal peritoneum for the visceral peritoneum that piece of bowel is caught between the two fingers and delivered through the wound and is the sigmoid.

The sigmoid is now lifted out of the wound sufficiently far to expose its mesentery. At the same time it is drawn upward out of the pelvis until its mesentery is taut. Lifting the gut completely out of the abdomen insures a good spur formation. It is this spur, or sudden turn of direction, of the fecal stream which mechanically prevents the subsequent bowel contents of the proximal portion of the bowel from passing on into the distal end. In this manner the major part of the sigmoid (except the lower two or three inches) is available as a pouch to retain the feces until the normal period of evacuation, and the patient experiences a normal sensation or desire to defecate, except of course that the feces escape at the new opening. If the sigmoid is drawn down from above as has been recommended by Harrison Cripps to prevent prolapse of the mucous membrane, a direct passage to the outlet is established and the intestinal contents constantly dribble at the artificial anus.

*Post Operative Care.* As soon as voluntary evacuations are obtained they are fluid in consistency and voided frequently and without our patient's control. This is because the raw edges of the several bowel, like ulcers in the mucosa, incite hyperstalsis and hurry the feces along. Hypersecretion is also induced of the mucosa. Impacted fecal masses within the colon also ulcerate the mucosa beneath them and these ulcers contribute further to the intestinal irritability. All this will gradually subside and by the time ulceration about the colostomy wound has healed

the patient will have daily formed fecal evacuations.

After he has fully convalesced from the operation he must endeavor to have a daily evacuation at an appointed hour. The diet must be chosen from those foods which the individual has used from childhood with the consideration of a well balanced ration and deleting only those substances likely to cause diarrhea.

Each day an enema is given into the oral bowel of 2 tea cups of water to which is added a rounded dessertspoonful of baking soda. This daily irrigation is one of the secrets of a competent abdominal anus.

A patient carried through his colostomy as I have outlined needs no special bandage to collect the feces or to control its escape.

### CONGENITAL ATRESIA OF VAGINA DUE TO IMPERFORATE HYMEN

M. S. NELSON, M. D.

CANTON, ILLINOIS

Owing to the unusualness of this condition I feel justified in reporting this single case of congenital atresia of the vagina due to imperforate hymen.

A review of the literature reveals a scarcity of reported cases and a study of the newer gynecological text-books also reveals a dearth of material. The material for the report of this case was gleaned from case reports and older text-books on gynecological conditions.

Ross in *American Medical Journal* of July, 1891, reports thirty-six collected cases of imperforate hymen which at that time represented a resume of the literature. Murphy in *British Medical Journal* of 1895 reports one case of imperforate hymen, imperforate os uteri; hematometra; hysterectomy. Nasiruddin in the *Indian Medical Gazette* of May, 1926, reports a case of retention of urine due to an imperforate hymen, and Schilling in the *American Journal of Obstetrics and Gynecology* reports a case of pregnancy with hymen intact.

Atresia hymenalis is a congenital condition more frequent than other forms of vulvar atresiae. The simplest form is that of its lowest extremity. The closure here affects the vaginal mucous membrane alone and does not consist,

as in atresiae above, of an absence of the entire wall with a replacement by fibrous tissue forming the septum. The hymen in these cases usually forms a thick tough resisting membrane.

The upper vagina and the uterus and tubes are, as a rule, well formed and functionally active in such cases. The condition of the hymen is rarely recognized until puberty when the failure of the appearance of the menstrual secretions is the occasion of the examination which at once reveals the anomaly. It may, however, be discovered in quite young children by the accumulation of mucus within causing the hymen to pout out forming a whitish sac between the labia beneath the urethra which becomes more prominent when the child cries. If this sac is opened a whitish mucus is discharged and no further difficulty is experienced.

J. C. Nott in 1843 called attention to atresia of vagina arising in young infants without any demonstrable cause. He cites two cases of infants perfectly normal at birth and healthy in every respect who were found several months later to have a closure of the vagina. In neither case was there any history of inflammation and in both the vagina opened spontaneously in course of a few months.

After puberty at each menstrual period the secretions are poured into the uterus and vagina, the more fluid parts are absorbed and leave behind a thick, tarry substance. In the course of time between the ages of seventeen and twenty the vagina may become distended into a sac big enough to fill the pelvis. The upper end of the sac is formed by the expanded uterus often with dilated tubes at either horn and a greatly distended cervix. The distinction between the uterine cavity proper and cervical canal is marked by the internal os uteri which preserves its identity although much dilated. The lower uterine segment opens up so as to appear like a continuation of the vagina; indeed the external os is often difficult to find. One of the most important complications is the distention of the uterine tubes by the backing up of the retained menstrual secretions.

The changes at the lower end of the vagina are quite characteristic and afford valuable diagnostic points, as they are readily accessible to inspection and touch.

There is a marked bulging convex tumor protruding between the labia which fluctuates dis-

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tinctly upon touch; posteriorly it is limited by the perineum, laterally by the inner surfaces of the labia and anteriorly it reaches the posterior margins of the urethra. If the tumor is large enough to fill the lower abdomen, rising as it may as high as the umbilicus, the wave of fluctuation is readily transmitted from above downwards as far as the tumor at the vulva. The rectal examination reveals an elongate sac filled with fluid occupying the position of the uterus and conforming in its general direction to the axis of the pelvis.

The symptoms are those of monthly pain of bearing down character in hypogastrium, back and thighs, abdomen tender and tympanitic, pulse increased, slight fever and nausea and vomiting may occur. These symptoms closely resemble peritonitis but usually disappear in a few days. After a lapse of three or four weeks symptoms reappear with increased severity. The general health is usually impaired, anorexia, nausea and vomiting, with constant headache. The eyes become dull, skin pasty and sometimes eruptions appear. The gradual enlargement of the abdomen gives suspicion of pregnancy.

Opinions as to the best surgical procedure in these cases of imperforate hymen are somewhat divided. These cases usually fall into the hands of the general practitioner and he is called upon to relieve them.

Sir J. Y. Simpson sounds this warning, "Beware of making light of such a case to the patient's friends and beware, above all, of telling them that the operation is either trivial or harmless."

In these cases Barnes says a free external outlet would make it easier for the contracting uterus to expel its contents by this route and thus take off the pressure. On the other hand the rapid retreat of the uterus would favor the laceration of the tubes if held back by adhesions. The balance of advantages and disadvantages of either plan is difficult to strike; and it is to be apprehended that cases will continue to occur in which a fatal result will follow any method of treatment.

Simpson and Duncan advise against washing out the cavity while Barnes says he is not quite sure but that the free incision and washing out is the best plan. Toit favors washing out after free incision. He reports six cases done in this manner and four done by the gradual method

without any fatal cases. It is quite evident that peritonitis is the complication to be avoided.

#### CASE REPORT

B. D., 13½ years old, first complained, after walking home from school, of backache, headache and nausea. She ate no supper and immediately went to bed. During the night, while turning over in bed, she felt a sharp pain in the right lower quadrant. This was accompanied by nausea and vomiting and followed by urgency and frequency of urination. She was forced to arise every few minutes to urinate. The following morning she was sent to the hospital. She had never menstruated and her first complaint dated back five or six months. This had been periodic in occurrence.

The family history was negative. No past history of typhoid, scarlet fever or diphtheria. Bowels had been sluggish for three days.

On physical examination the abdomen was tender, rigid and slightly tympanitic. Temperature 99.6, pulse 110, respirations 20 and white blood count 22,000. No rectal or vaginal examination was made. A tentative diagnosis of acute appendicitis with a positive diagnosis of a surgical abdomen was made.

On opening the peritoneal cavity the omentum was congested and a dark colored fluid was in the abdominal cavity. The right tube was examined and resembled a ruptured ectopic pregnancy. This on account of her age prompted an examination of the hymen which was found to be imperforate and bulging. The hymen was then opened with a scalpel and about three quarts of dark tarry liquid material escaped through the opening. The left tube was then explored and found to be eight times its normal size. A true hematosalpinx. This was removed, because of beginning necrosis of its walls, and also a normal appendix.

The abdominal wound was closed without drainage. The vagina was then irrigated with sterile water and a soft rubber tube drain inserted. The hymen was of dense fibrous tissues. She made an uneventful recovery. Reporting four weeks later the incision in the hymen had sealed over. This was reopened under local anesthesia by a crucial incision and the flaps sutured to the vaginal wall. Since this operation she has had regular menstruations with no recurrence of former symptoms.

This case represents an error in diagnosis and teaches us that a routine inspection of the genitalia is indicated in every case of a girl at puberty who complains of lower abdominal pain.

#### VACCINE THERAPY IN PNEUMONIA A PRELIMINARY REPORT

DON C. SUTTON, M. D.

Assoc. Prof. Medicine, Northwestern University, Attend. Physc., Cook County Hospital.

CHICAGO.

"Of all the diseases which may be classified as typical, i. e., those which generally follow so definite a course, going through certain

changes from day to day with such constancy that they may be safely predicted and lasting a period so close to the average that the duration of the illness may be accurately estimated at its onset, of all such diseases there is none truer to its type than the pneumococcus pneumonia."—Preble. Yet in spite of so definite a course there is no disease more difficult to properly evaluate the effect of a method of treatment either in its effect on the course or on the mortality of the disease.

The ideal to be sought for in the treatment of this disease is undoubtedly an anti-serum that is as effective as that of antidiphtheritic serum. To such an end Cole has developed an anti-serum effective especially in type I infection, much less so in type II and III, and slightly better in type IV. Large quantities of horse serum must be given attended with the usual dangers of serum reactions.

Huntoon has prepared specific antibodies to the pneumococcus freed from the horse serum. These antibodies are also chiefly effectual against type I. Although it does not have the danger of serum reactions, it is given intravenously and often produces extreme general reactions.

Felton has a somewhat similar serum which is effective against types I and II.

All of these sera are especially effective against a certain type infection and necessitate determination of the type of pneumococcus, a practice as yet impractical for the profession as a whole.

Lambert reported to the Association of American Physicians in 1926 the use of a stock vaccine containing 1,000,000,000 bacteria per c. c., 200,000,000 of Pfeiffer's influenza bacillus, 100,000,000 pneumococcus, 100,000,000 streptococcus, 200,000,000 micrococcus catarrhalis and 200,000,000 each of staphylococcus aureus and staphylococcus albus. He reports results in all types of pneumonia that are at least as favorable as those reported for anti-sera.

# LAMBERT'S OBSERVATIONS

	Vaccine Cases			Control Cases		
	total	died	%	total	died	%
Total cases treated.....	221	47	21.2	286	116	40.5
Cases treated						
first 48 hours.....	51	3	5.8	69	29	42.0
first 72 hours.....	71	7	9.8	102	38	37.0
after 72 hours.....	150	40	26.8	184	78	42.3
Mortality in Type I ....	8.0	per cent.		17.0	per cent.	
Mortality in Type II ...	16.0	per cent.		72.0	per cent.	
Mortality in Type III ..	12.0	per cent.		35.0	per cent.	

Mortality in Type IV ..	17.0	per cent.	27.0	per cent.
Cases under 50 years....	16.4	per cent.	29.9	per cent.
Cases over 50 years.....	33.3	per cent.	59.0	per cent.

Wynne using a similar vaccine reports comparable results in England.

Because of the results reported by Lambert the same stock vaccine has been used in Ward 64 of the Cook County Hospital. This, a Male Ward of somewhat more than 100 beds, has two medical services consisting of the service of Doctors Kerr and Volini and a senior and junior interne, and of Doctors Sutton and Chase with two internes. The nursing service of the ward is under one head nurse and is the same for both services. The standing orders for the treatment of pneumonia cases of the ward are the same and all pneumonias are housed in the same unit.

The observations have been restricted to only the one ward, because all patients receive exactly the same treatment, with the exception that all the cases on the Sutton-Chase service received the vaccine, and those of the other service are the controls. All patients are assigned to service in the general admitting office of the hospital, therefore giving neither service preference as to the type of case received. Immediately upon the assignment of the case to the pneumonia unit the vaccine therapy is started and 1.5 c. c. is given hypodermically every six hours until the temperature reaches normal, then every twelve hours for two days. These observations were begun November 1, 1926, and although the study is still in progress the figures given are to March 1, 1928. These cases, therefore, really cover the pneumonia "seasons" of two years, namely 1926-1927 and 1927-1928.

In all, 128 cases have been treated by the vaccine and 148 have been treated as controls. Of this number forty-nine have died in the vaccine group, or 39.2 per cent, and eighty have died in the control group, or 61.2 per cent. In this group of cases, seventeen in the vaccine cases and twenty-four of the controls died within twenty-four hours of entrance into the hospital. If this group of practically moribund cases is removed from the list we then have a group that received treatment for twenty-four hours or longer, namely 108 vaccine treated cases, of which thirty-two died—a mortality rate of 29.0 per cent., while in the control group of 124, fifty-six died, or a mortality of 45.1 per cent. It would appear reasonable to presume that in a



disease of the severity of pneumonia, the earlier any method of treatment is instituted the better the chance for recovery. Also, the moving of the patients at the height of the disease is often an additional burden which the patient cannot carry. If, then, these cases are divided into groups according to hours after the onset, a conclusion as to the effect of duration can be reached.

PNEUMONIA CASES TREATED IN WARD 64, COOK COUNTY HOSPITAL						
	Vaccine Cases			Control Cases		
	total	died	%	total	died	%
Cases treated						
within 48 hours of onset	16	1	6.2	24	16	66.6
within 72 hours of onset	32	5	15.0	43	26	60.0
after 72 hours of onset	76	27	35.0	81	30	37.0
All cases treated (except those dying within twenty-four hours).....	108	32	29.0	124	56	45.0
All cases treated.....	128	49	39.2	148	80	61.2

On the basis of this division it is quite evident that the earlier the treatment is begun the better the chances of recovery, although apparently the earliness of hospital entrance has little or no effect on recovery of the controls.

Dr. Frederick Tice, from November 21, 1923 to June 27, 1924, and during 1927, treated a series of cases in Ward 61, a female ward. In this series the cases were alternated on admission, each alternate case being a control.

DR. FREDERICK TICE'S CASES IN WARD 61, COOK COUNTY HOSPITAL						
	Vaccine Cases			Control Cases		
	total	died	%	total	died	%
Cases treated						
within 48 hours of onset	9	2	22.2	8	3	37.5
within 72 hours of onset	19	2	10.5	26	8	30.7
All cases .....	52	13	25.0	49	18	36.7

It will be noted that the relative percentages are practically the same. If the two series are combined the results are as follows:

PNEUMONIA CASES IN WARDS 61 AND 64 COMBINED						
	Vaccine Cases			Control Cases		
	total	died	%	total	died	%
Cases treated						
within 48 hours of onset	25	3	12.0	32	19	59.3
within 72 hours of onset	51	7	13.7	69	34	49.2
All cases treated (except those dying within twenty-four hours) ....	160	45	28.1	173	73	42.1

COMBINED TABLE OF ALL CASES QUOTED IN PAPER						
	Vaccine Cases			Control Cases		
	total	died	%	total	died	%
Cases treated						
within 48 hours of onset	76	6	7.8	101	48	47.5
within 72 hours of onset .....	122	14	11.6	171	72	42.1
All cases treated.....	381	92	24.1	459	177	38.5

In the use of this vaccine no untoward results have been noted. In all the cases 1.5 c.c. has been given every six hours and in a few cases, which will be reported later, it has been given in 1.5 c. c. doses every two hours. In no case has there occurred a chill, rise in temperature or increase in pulse rate following the injection. Instead, as shown by Lambert, the fall of temperature, pulse and respiration is noticeable within twenty-four hours and curves downward more rapidly than in the controls. It has been the constant comment by the head nurse that the vaccine treated cases are much less sick and more comfortable than the controls, and that not infrequently the patients themselves remark upon the sense of well-being after a few hours.

In a small series of private cases similar observations were made by the nurses on duty. In this series, all of which received the vaccine within the first twenty-four hours, no deaths occurred.

One of these private cases was a young woman six months pregnant. She was first seen twelve hours after her chill, with a temperature of 103.6. She was having strong uterine contractions. She received the vaccine four times a day for six days, making a complete recovery and without miscarriage.

It is rather striking, with different observers in two widely separated districts and through different years, that the relative mortality rate is so constant. This is especially true of those cases treated within forty-eight to seventy-two hours of the onset. Whether these effects are due to a specificity of the bacterial content of the vaccine or to a non-specific protein effect is as yet undetermined.

CONCLUSIONS

- 1. Rather striking results in the treatment of types of pneumonia with stock vaccines, especially when begun within forty-eight to seventy-two hours of the onset, are presented, based upon the analysis of 381 treated and 459 control cases.
- 2. No untoward reactions have been observed.
- 3. The stock vaccine offers a readily obtainable treatment which may be used early in the disease.

30 North Michigan Avenue.

## THE PREVENTION AND TREATMENT OF HEART DISEASE IN CHILDREN\*

HENRY EUGENE IRISH, M. D.

CHICAGO

The broad scope of this title, assigned for this short space of time, prevents more than a rapid mention of many aspects of this problem. If my statements appear thin and sketchy in places, I hope you will appreciate that time rather than the triviality of the topic is the compelling factor.

It is obvious that no approach to these problems can be made without considering the diagnosis of the existing condition. It is highly important to make a diagnosis of an organic heart lesion, it is equally important not to subject a patient to a long period of bed restriction for a harmless functional physiologic variation.

Certain factors operate to make the diagnosis in children's hearts relatively more difficult than in adults. The infrequent securing of quietude or cooperation during the examination is a great hindrance. Auscultation is also less satisfactory because of the rapid heart rate, which is from

6 to 12 months,	115 to 105,
2 to 6 years,	105 to 90,
7 to 10 years,	80 to 90,
11 to 14 years,	75 to 85.

The pulse rate is often unduly accelerated by trivial causes such as slight temperature or emotion. A slow pulse is more infrequent and oftener of pathologic significance. The heart borders are differently located. At birth the apex is higher and farther to the left, being outside the mammary line until the fourth year. It remains about the nipple until the ninth year, gradually dropping down and reaching the adult position at the thirteenth year.

Arrhythmias are not uncommon in healthy children. Sinus or inspiratory type (which disappears when the breath is held), bradycardial and temporary convalescent arrhythmia are each regarded as physiologic rather than pathologic. A few cases of true heart block, which may have grave consequences have been reported.

Functional, accidental and the hemic murmurs were present in 66.2 per cent. of eighty

healthy children.<sup>1</sup> Holt says they may be found on careful examination in fifty per cent. of all children. They are soft, systolic, not transmitted, unaccompanied by abnormalities in heart borders or symptoms of cardiac disease. They may change in quality or disappear with changes in posture, time and pulse rate. Amelioration of an anemia or blood transfusion may cause complete disappearance of a hemic murmur.

Organic murmurs are characterized by all degrees of intensity, may be diastolic and are usually transmitted in the direction of blood flow, but if loud, may be heard all over the chest. They do not change or disappear with posture and may be intensified by having the child sit up and lean forward so that the heart is brought closer to the chest wall. The heart percussion dullness will be changed if hypertrophy or dilatation pericardial exudate has occurred. Precordial pain may be associated with dilatation or myocarditis or with a pericardial plastic exudate. In children, it is often referred to the epigastrium. A history of antecedent or accompanying rheumatic symptoms or the finding of extracardial rheumatic disease assists greatly in diagnosis.

In acute endocarditis, the murmur is often undiscovered and undiscoverable until some days have elapsed, being either inaudible in the presence of acute tachycardia or nonexistent until vegetations or scar contractions interfere grossly with the blood current. When heard distinctly in the first few days of fever, it is most probably an old lesion from a former attack.

Anatomic diagnosis of the valve lesion is often impossible in rapid hearts and it is helpful to know that almost all of the acquired organic murmurs are due to mitral insufficiency. "Of 141 cases of valvular disease, mitral murmurs were present in 135, in 131 the murmur of mitral insufficiency was heard and in 99 this alone."<sup>2</sup> Still<sup>3</sup> reports 241 of 250 cases and in 124 of these there was a diastolic murmur as well indicating a complicating mitral stenosis.

In adults, heart disease is classified (Maurice Lewison) etiologically into:

1. Hamill and LeBoutillier: *Am. J. Med. Sci.*, 1907.
2. Holt and Howland: *Diseases of Infancy and Childhood*, D. Appleton and Co., 1926, p. 473.
3. Griffith: *Diseases of Infancy and Childhood*, Vol. II, p. 149.

\*Presented before the Warren County Medical Society, Monmouth, Illinois, January 12, 1928.



1. Rheumatic.
2. Syphilitic.
3. Arteriosclerotic.
4. Hypertensive.
  - (a) Primary.
  - (b) With obesity.
  - (c) With diabetes.
  - (d) With nephritis.
5. Thyrotoxic.

Since many of the above conditions are rarely or never found in children, a usable classification is:

1. Congenital.
  - (a) Anomalous.
  - (b) Intrauterine infections.
2. Acquired.
  - (a) Rheumatic.
  - (b) Scarletinal.
  - (c) Diphtheritic.
  - (d) Bacterial endocarditis (septic).
    - Streptococcic
    - Pneumococcic.
    - Typhoid.

Bacterial endocarditis (septic); (malignant); (ulcerative), may follow septic wounds, ulcers, erysipelas, typhoid, pneumonia, gonorrhea or meningitis. It is more frequent in infants than adults. It may pass into the circulation primarily without a discoverable atrium or antecedent. Its diagnosis rests, in the acute form, upon the findings of septicemia, signs of carditis and a positive blood culture. In the chronic form it may resemble typhoid with cardiac findings and a positive blood culture.

Prevention and treatment are alike unsatisfactory. The mortality of the acute forms is nearly 100 per cent. and the subacute form 94 per cent.<sup>4</sup> Despite some encouraging reports by others, we have tried intravenous quinine, mercurochrome, whole and convalescent blood and arsenicals without appreciable effect.

Congenital heart anomalies are not preventable and treatment is futile. It can only be directed against excessive exercise dilatations and the usual termination from infection of the hypostatic bronchi and lungs. The few surviving the age of puberty have mild lesions, usually without cyanosis. Congenital hearts occur once in 450 births and constitute six per cent. of organic heart disease (1,252 cases)<sup>5</sup> but Still<sup>6</sup> found in 2,792 sick children under ten years of age sixteen

cases (0.57 per cent.). Its diagnosis from acquired lesions is usually simple because of the locations of the murmur on the right side of the heart in the pulmonic or tricuspid areas, with cyanosis and clubbing of fingers and toes.

Diphtheritic hearts in 1904<sup>7</sup> showed cardiac symptoms in 878 of 946 cases of diphtheria. Private practice today with early and adequate anti-toxin administration has reduced this high percentage to almost nothing. Endocarditis, cardiac thrombus and neuromuscular paresis and paralysis may occur. This last form may or may not be associated with signs of vagus disturbances, such as respiratory irregularities or gastric irritation with vomiting. Sudden death without premonitory slowing or rapidity and weakening of the pulse may occur. Warthin<sup>8</sup> in post-mortems found in the heart a "toxic, parenchymatous necrosis associated with fatty degenerative infiltration or with cloudy swelling."

Edmunds<sup>9</sup> deduces from his experiments in dogs that there is a circulatory failure with vasodilatation and anemia in arterial vessels as well as the vital centers of the brain. He finds reserve energy even in badly damaged hearts. Intravenous ten per cent. dextrose at 40° C. cause a prompt rise of blood pressure which can then be further increased by adrenalin, pituitrin, and digitalis. He attributes this remarkable effect to the increase of the bulk of fluids and to the nutritive effect of the dextrose in supplying muscle sugar to the heart. Camphor and strychnin were without effect.

This suggests the possible prophylactic worth in diphtheria of maintaining a high sugar intake of four grams (90 grains) to the kilo (two pounds) of body weight for each twenty-four hours. Dextrose (cerelese) is pleasant tasting and inexpensive.

If possible, this should be given by mouth in milk and food. Pure sugar candy (fudge) will tempt some and highly sweetened acid drinks, such as lemonade or orangeade can be offered. If refused, the deficiency can be supplied by subcutaneous five per cent. dextrose solution. Intravenous (five per cent. or ten per cent.) solutions, warm at 40° C. (105° F.) is advised if cir-

4. Adams: Trans. Am. Ped. Soc., 1902, xiv, 100.

5. Norris: Arch. of Ped., xxiii, July.

6. Still: Loc. cit., p. 121.

7. White and Smith: Boston Med. and Surg. J., 1904, cli., 433.

8. Warthin: Jour. Inf. Dis., 35, 32, July, 1924.

9. Edmunds: J. A. M. A., 1925, lxxxv, 1798.

culatory collapse is present and repeated as indicated by fall of blood pressure and rise of pulse rate.

Fluids are required in amounts of 45 grams (one and one-half ounces) to 500 grams (one pound) of body weight up to thirty pounds. Thereafter, at least three pints in twenty-four hours are needed and if refused by mouth, rectal or subcutaneous administration is imperative.

Prevention of diphtheritic heart pathology depends upon early and adequate antitoxin. For early mild cases up to the third day, nothing less than 10,000 units should be used. For later or malignant cases double or triple that amount is given. Nasal and laryngeal cases should have double and triple 10,000 units. Repetition of the doses after twenty-four hours may be tried, but if the first large dose does not give results, repetitions are for the most part disappointing. If the urgency is great, intravenous administration is well worth while for quicker results.

The perfection of scarlatinal antitoxin should prove a distinct aid in preventing scarlatinal endocarditis. Its unquestioned efficacy in diminishing the course and complications as attested by an increasing number of observers, may justify its employment even in those milder cases in which, as is well known, very serious complications may follow. Although the mortality of scarlatina decreased from 6 per 100,000 population in 1906 to 2 in 1926, the case fatality rate declined from 5.3 per cent. to 0.74 per cent. in the same period, owing to the increase in the morbidity rate (112 in 1906 to 268 in 1926 per hundred thousand population).<sup>10</sup>

Albert's tabulation includes the statistics of the states of Connecticut, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Montana, New Jersey, New York and Pennsylvania.

Chicago experience shows corresponding drops for the year 1926 as compared with 1906.

#### CHICAGO—SCARLET FEVER

	Mortality Rate	Morbidity Rate	Case
	per 100,000	per 100,000	Fatality
			per cent
1906.....	24.7	254.6	9.68
1926.....	2.6	162.3	1.57

It is only logical to expect fewer heart sequelae

with the routine use of curative scarlatinal antitoxin. The use of the prophylactic antitoxin has been attended by so many alarming anaphylactic episodes that its use should be preceded by proper sensitization tests or avoided until some further refinements in the product have eventuated.

Rheumatic heart disease is the most frequent variety in children. Weill<sup>11</sup> said endocarditis causes five per cent. of all diseases of early life and in 258 cases of endocarditis found seventy-three percent. due to rheumatism.

Its diagnosis is made in the presence of signs and symptoms of carditis (endo-, myo-, peri- or pancarditis) with a history or findings of its congeners, such as tonsillitis, arthritis, myothenitis, chorea, subcutaneous tendinous nodules, rheumatic erythema marginatum, papulation or nodosum.

Rheumatic tonsillitis in young children generally is painless and often symptomless. It may be frequently recurrent, acute, subacute or chronic, with swelling, redness, fissures and crypts, with hyperemic anterior pillars, with enlarged adjacent "sentinel" cervical glands. Fever varies with the acuity. Chronic forms show slight and irregular fever if temperature is persistently taken.

Arthritis (more accurately, periartthritis) in children under six years is unlike the form seen in adults with red, hot, swollen, painful joints. Instead, there is slight pinkish or uncolored moderate swelling, painful to movement, rarely to touch, around the joints or along the tendon sheaths. When, in a young child, a red, hot, swollen joint is seen, with fever and chills, the condition is practically always pyemic. It is termed variously, acute purulent arthritis, acute epiphysitis, acute osteomyelitis or pyemia of the bone. Other signs of pyemia (malignant endocarditis, petechiae, positive blood culture, etc.) can usually be found and the malignant course and fatal outcome afford a sad confirmation. Four cases (all previously diagnosed rheumatism) have been seen in the last year by me.

Other conditions that simulate rheumatism in children are scurvy, perineuritis of infantile paralysis, trichinosis, fractures near joints, syphilitic periostitis, tuberculous or gonococcus arthritis, or smallpox-myalgia.

10. Albert: J. A. M. A., Vol. 89, 16, 1313, October 13, 1927.

11. Weill: Traite des mal de l'enf., 1904, iii, 808.



Myothenitis (myositis or myalgia so-called) may affect almost any muscle sheath. It may be a lumbago or a torticollis which, however, is more often due to an adenitis of a gland underlying and impinging on the sheath of the sternocleidomastoid muscle. Torticollis may be due to a cervical Pott's disease, or a hemorrhage into a muscle torn in parturition or to a nerve injury.

Growing pains, popularly called, are usually a manifestation of rheumatic myothenitis but some are conceivably due to muscle strain, if that be unusual in severity or nature. Some may be due to orthopedic conditions such as flat feet, postural aberrations, Morton's metatarsalgia, etc.

A history of pains being recurrent, multilocal or polyarticular, fleeting or evanescent, can nearly always be elicited if the pain is rheumatic. Pain fixed at one point is usually something else.

Chorea (Sydenham type) is one of the manifestations of rheumatism in childhood. A fully developed case shows movements that are irregular, jerking, spasmodic, purposeless and involuntary. Various degrees are seen from slight twitching of the fingers to those involving the whole body in constant convulsions (chorea insaniens). They are to be differentiated from habit spasms, hereditary tic, hysteria and the athetosis of post-infectious hemiplegia and encephalitis. Chorea may be limited to one side of the body (hemichorea). Subcutaneous nodules are found over tendons appearing as "oval, semitransparent fibrous bodies like boiled sago grains." While not frequent, they are found oftener when looked for carefully.

Erythema (marginatum, papulatum and nodosum) are often but not always rheumatic manifestations.

Prevention of rheumatic heart disease is largely possible if early recognition of its antecedent and accompanying manifestations prompt early and adequate management. Dry, sunny, evenly but moderately heated living quarters are essential. Clothing of sensible uniform thickness, light woolen garments, and woolen sheets have an ancient reputation because of their more gradual heat and moisture dissipation whereby chilling is avoided. Dry feet are essential. Overheated houses and over-swaddling (bundling) with clothing particularly about the neck, are alike undesirable. "Hardening" against colds

requires judgment, but if conducted gradually with cool neck sponges in the morning, exercise in the open without too much clothing about the neck, and sleep in rooms with a raised window at a temperature of 50° to 60° F. much good can be accomplished.

Rheumatism is probably mildly infectious and contact is better avoided. General resistance is enhanced by a diet adequate qualitatively and quantitatively, with special attention to the inclusion of all the vitamins.

The treatment of subacute or acute rheumatic carditis is the treatment of rheumatism with adequate salicylates and alkalies. Children bear salicylates well and initial doses of one grain of sodium salicylate to each pound of body weight for twenty-four hours is not too much. Potassium citrate in like doses is required to keep the urine alkaline (Cushny). This dosage is to be diminished with improvement but the drugs should be continued in smaller doses for at least a week after fever is normal. Rest for the heart is secured by rest in bed during and after the cessation of fever. Opiates diminish restlessness and slow the heart. The icebag is invaluable with fever over 101° or tachycardia over 110. It is of the greatest importance to so synchronize orders at three or four hour periods so that toilet, alimentation and medicine needs be cared for at these times permitting the intervening time to be reserved wholly for rest, without any disturbance whatever.

Anemia is a prompt and serious feature of rheumatism. It may be responsible for the prolongation of tachycardia or of a dilatation owing to the anemic asthenia of the heart muscle. An anemic diet<sup>12</sup> embracing liver extract, cod liver oil, egg yolk, spinach and lettuce (for its vitamin H, iron fixing content), together with dextrose in liberal amounts for its muscle sugar food value is of fundamental importance. Ultraviolet rays for non-febrile cases materially assist in reducing anemia. Arsenic has a long established reputation in chorea and post-febrile rheumatism which may be due to its hematopoietic action. It does not shorten the attack nor reduce the intensity of contractions. Luminal is a quite effective antispasmodic.

Recurrences of rheumatism are frequent and

12. J. A. M. A., 89, 10, p. 793, Ed.

while not wholly preventable are certainly seen oftener when medication is stopped before a week of normal temperature.

As a preventive of both primary and repeated attacks, the removal of foci of infection in tonsils, teeth and accessory nasal sinuses is of value. It is well summarized by Kaiser,<sup>13</sup> who says:

1. A survey was made of 48,000 school children, in 20,000 of whom the tonsils had been removed and 28,000 of whom they had not been removed.

2. The history pertaining to rheumatic fever, chorea, scarlet fever and heart disease has been obtained, and 1,200 showing signs of rheumatic fever, chorea or heart disease have been examined.

3. Most of the 20,000 children have had their tonsils removed for a period of five years or more.

4. Rheumatic fever, joint pains or growing pains occurred in both groups; eight per cent. of the tonsillectomized group and ten per cent. of the nontonsillectomized group had rheumatic manifestations. Many of the former had had rheumatic symptoms before tonsillectomy. The tonsillectomized child not yet infected has a decidedly better chance to escape rheumatic infection over the same period of time than the child whose tonsils have not been removed. Recurrent attacks of rheumatic fever were less common in the group in which operation had been performed.

5. Chorea occurred only slightly less often, 0.4 per cent. as compared to 0.5 per cent., in the tonsillectomized group. The incidence of carditis following chorea was decidedly less in the tonsillectomized children.

6. Scarlet fever occurred in 7.6 per cent. of the tonsillectomized children, and in sixteen per cent. of the nontonsillectomized group. The children whose tonsils had been removed who developed scarlet fever developed considerably less valvular heart disease than those with scarlet fever in the control group.

7. Rheumatic heart disease was found in 450 of the 20,000 tonsillectomized children and in 817 of the 28,000 who were not operated on. Many of the children in the former group developed heart disease before tonsil enucleation. A careful analysis of 478 cases of carditis showed that in 83 per cent. the condition developed before tonsil removal, and in 17 per cent. following tonsillectomy.

8. Based on a control study of 20,000 tonsillectomized children, it must be concluded that the tonsil is a factor in the causation of rheumatism, scarlet fever and chronic heart disease. The tonsillectomized child is assured greater protection against these infections than his companion whose tonsils have not been removed.

Teeth infections, as revealed by gross and roentgenographic examination, should be mercilessly eradicated, even though the dentist may

protest that the development of the jaw growth will be inhibited. Orthodontic measures will save the shape of the jaw while nothing may be able to restore a crippled heart. Sinus examinations in the hands of competent rhinologists may be of value.

Decompensation of the heart demands a reliable assayed preparation of digitalis in full doses upon the first appearance of moist rales in the bases of the lungs, passive congestion of the liver or edema. Digitalis is probably not indicated in other cardiac conditions and may do harm if used otherwise. Hare believed that it increased cardiac muscle nutrition from his experiments upon young pigs. It does not slow the acutely infected heart, nor the heart of young children because it stimulates the inhibitory action of the vagus, which does not develop largely until after the fourth year. Children bear and need large doses, about two or three times the amount in proportion to weight for the adult. Camphor and strychnine are again denied efficacy upon the heart.<sup>14</sup>

The time for and amount of exercise is well presented by St. Lawrence,<sup>15</sup> who holds that a graduated systematized return to exercise should be started nine days after the cessation of fever, that heart failures are due mostly to reinfections rather than to overindulgence in exercise, because of the febrile accompaniment which he believes to be invariably present in such cases. He grades these hearts into three classes:

1. Those with normal exercise tolerance who are able to pursue the physical activities of normal children with no great circulatory reaction.

2. Those with a diminished exercise tolerance who suffer from excessive circulatory reaction for the work performed.

3. Those with severe cardiac failure (decompensation) whose hearts are unable efficiently to meet the circulatory needs at rest in bed and hence have no exercise tolerance.

For Class 1 he recommends exercise unrestrained except by the child's own sense of dyspnea or fatigue.

For Class 2 he removes such possible factors as chronic infection and anemia, saying that then "the increased desire for exertion elevated the

13. J. A. M. A., Vol. 89, No. 27, p. 2239 (December 31), 1927.

14. J. A. M. A., 90, 1 (January), 1928, p. 34 (Ed.).

15. J. A. M. A., 89, 27 (December), 1927.



exercise tolerance automatically and there will remain only a few children in this class, perhaps not more than four or five per cent. enrolled in this clinic." A full perusal of this excellent paper is recommended.

In Chicago much effort has been directed against overstrain. Children returning to school are advised to attend the Spaulding School for crippled children where ascent to the upper floor can be made by ramps instead of stairs. Busses carry children to and from their homes and full supervision of exercise is maintained until complete return of balance as indicated by normal pulse, response to graduated exercise, is obtained. Various tests are used to determine the cardiac balance. May Wilson uses a combination of exercise test with respiratory exchange observations. As a simple test, the patient may hop on one foot for thirty seconds, after which a return of the preceding pulse rate after two minutes is considered functionally normal. Familiarity with the interpretation of some *one* test is quite necessary in those who advise the amount of activity for cardiac cripples if dilatation is to be avoided. The greatest obstacle to success lies in the difficulty of obtaining full cooperation of parents who are naturally impatient or negligent in prolonged resoration to normal activity.

Realization of our full responsibility in accurate diagnosis, adequate treatment and painstaking management in a field where our presistent efforts can make the difference between disaster and triumph should stimulate all physicians to attain the greatest possible degree of perfection in the prevention and treatment of heart disease in children.

University Hospital,  
432 S. Lincoln Street.

## THE LARYNX AS A GAUGE OF INTRA-THORACIC PRESSURE\*

N. SCHOOLMAN, M. D.  
CHICAGO

In a case recently referred to me, I have been able to make a diagnosis of a probable existence of an aneurism of the arch of the aorta by the examination of the larynx.

The patient was a woman over fifty years old

and was referred to me on account of some indefinite complaints, referable to her neck and throat. She had the sensation of a foreign body in her throat. At times, she felt as if her breathing was not good, especially on exertion. At other times as if her voice was not strong, and at times also as if she could not swallow easily, yet, on questioning, none of the symptoms could be made out as at all serious, because she was a woman actively attending her household duties, walking up and down stairs and taking her meals with regularity and comfort. Considering her age and the fact that she was somewhat obese, all her symptoms could be easily explained by the paresthesias incident to the climacteric period, to obesity and neuresthenia. But, on the examination of her larynx, I found that her left vocal cord was immobile, that it could not move from the median line, a finding which is definite and calls for a definite explanation as to its cause.

Immobility of a vocal cord may be caused by cancerous, gummatous or tuberculous invasion of its musculature, a rheumatoid arthritis of the crico-arytenoid joint and paralysis of the recurrent laryngeal nerve. A glance at her throat eliminated any intra-laryngeal inflammatory condition; there were none. No infiltrations and no pain. We were therefore, at once led to the conclusion that we were dealing with a nerve paralysis here.

The recurrent laryngeal, especially on the left side, has a long course. Branching off from the pneumo-gastric in the cervical region, it descends into the chest cavity, winds around the arch of the aorta, comes up again to the height of the larynx and there pierces into its interior. In its long and devious course it may be subjected to pressure in the neck as well as in the thorax.

We were able to eliminate the former by finding no signs of tumors or enlargements in the neck, and were led to the conclusion that the pressure is exerted in the thorax. Intrathoracic pressure as the cause of a paralysis of the recurrent laryngeal may be due to malignant or benign tumors, and, as is most often the case, to an *aneurism of the arch of the aorta*. There was something in the history of this case as elicited by careful questioning, that seemed to exclude from our mind, the existence of mediastinal tumors, for this reason.

The larynx has a double set of muscles, one

\*Case Reports from the Ear, Nose, and Throat Clinic of the Mt. Sinai Hospital of Chicago, and the Illinois Eye and Ear Infirmary.

set opens it (the abductors), another set closes it (the adductors). Both sets are supplied by the same recurrent laryngeal nerve. If the openers alone are disabled, then the vocal cord stands near the median line, a position unfavorable for breathing, but not unfavorable for voice production. On the other hand, if the closers alone are disabled, then the paralyzed vocal cord stands away from the median line, a position unfavorable for voice production but not unfavorable for breathing. When both sets of muscles are disabled, then the vocal cords can neither close nor open but stand midway between opening and closing, which is known as the Cadaveric position. In this situation breathing is not much interfered with and voice production is not impossible, particularly when only one cord is affected.

On inquiring into the history of this patient's laryngeal difficulties, I was struck by the fact that her complaints alternated from the phonatory to a respiratory character. That at times it was her breathing that embarrassed her while her voice was satisfactory, and at other times it was the reverse. Such a changing of the clinical picture suggests a cause of variable and not of constant tension. Now, the pressure that solid growing tumors exert within the thoracic cavity are of a constant and progressive nature and we were therefore led finally to the view that the pressure exerted within the thorax of this patient was caused by a distended aorta, a tumor which is not constant but may vary from time to time, according to treatment, the amount of rest, or the amount of excitement or exertion that the patient is exposed to, and this deduction was corroborated by the actual viewing of the aorta by fluoroscope and x-ray. This woman's aorta, as the x-ray man assures us, was two-thirds the width of her heart, and yet, the patient did not manifest any urgent symptoms suggesting such a signally important cardio-vascular condition, and only examination of the larynx aroused suspicion so that here the examination of the larynx helped towards an early diagnosis.

I do not know how long it takes for an aneurism of the aorta of some size to be developed. I suppose one is justified in assuming that it might have taken months and perhaps years. From additional evidence of the paralyzed vocal cord, I am led to believe that this aneurism has

existed for some time because of signs of secondary contractures in the paralyzed muscles. I am also justified in the belief that had the laryngologist had the opportunity of examining this patient months ago, attention would have been called to this condition much earlier. I do not know what measures of relief the internists have for aneurisms of the aorta, but I am justified in thinking that whatever they have could best be used at the early period of its development.

Among the greatest achievements in medicine may be counted the growing ability of making early diagnosis and it is accounted a triumph of our specialty to be able to contribute towards it.

In conclusion, let me say that the recurrent laryngeal is truly a "Chip off the old block" of the vagus, of that marvelous and mysterious nerve that emerges through the base of the skull, runs down the neck and ramifies throughout the chest and abdominal cavities. I am quite sure that much of the complexities of clinical situations must be due to pressures and other influences upon this nerve along its long course. But this nerve is hidden from our view. It is only in the larynx where we are privileged to watch with our eyes, the forces of the pneumo-gastric at play and note its variations. It is this circumstance that endows the examination of the larynx with singular significance. Routine examination of the larynx will often yield unexpected and surprising results and lead to the victory of an early diagnosis not only in such instances here recorded, but it will also help in the recognition of the early stages of cancer and tuberculosis, not to mention some of the manifestations of Tabes and Hysteria.

30 N. Michigan Ave.

#### TREATMENT OF PERNICIOUS ANEMIA WITH HIGH CALORIC DIET, RICH IN VITAMINS

Careful inquiry made by Karl K. Koessler and Siegfried Maurer, Chicago (*Journal A. M. A.*, Sept. 3, 1927), into the dietary habits of patients suffering from severe anemia leads to the information that between 75 and 80 per cent of all patients suffering from the disease have lived on a regimen deficient in essential foodstuffs for many years. A diet rich in all vitamins is insisted on. Vitamin A is first supplied to the anemia patient by giving cod liver oil, 5 cc., four times daily. Butter (not oleomargarine), from five to six pats, should be taken daily on vegetables and on bread. Whole wheat bread made with milk instead of water is richer in vitamins A and B than white bread.



Wheat germ in an alcoholic concentrate is used as an excellent source of vitamins A, B, D and E, and when it is given in orange juice all five known vitamins are supplied at once. Whole milk and cream are valuable foods since they contain, especially in summer, a good deal of the three vitamins A, B and C. Eggs, especially the yolk, are rich in vitamin A and also contain B. Vegetables that should be taken daily are tomatoes, fresh if possible, and stewed or canned if not in season. They are a very rich source of vitamins B and C and contain also A in smaller amounts. Then spinach (A, B), lettuce (A, B, C), cabbage (fresh, raw, A, B, C) and carrots (A, B, C). In addition or as substitutes may be eaten fresh string beans (A, B, C), Swiss chard (A, B), dandelion greens (A, B), or beetgreens (A, B), cauliflower (A, B, C), endive (A, C), peas (A, B), sweet potatoes (A, B), and Hubbard squash (A). Fruits should be taken daily to furnish plenty of vitamin C and to a lesser degree A and B. The best fruits for this purpose are oranges, lemons, grapefruit, pineapples (if possible, fresh), strawberries, raspberries (C), apples (sauce) and bananas. All these are to be eaten fresh if possible. Of meats, liver and kidney contain the largest amount of vitamins A and B and also some C. Sweetbreads and brains, beefheart and lungs stand next in richness in vitamins. Beefsteak or any other part of the skeletal muscle is much inferior in vitamin content. Full menu is given as an example of the diet to be consumed in twenty-four hours. This diet does not impose any hardships on the patient. Most of the foods it contains are eaten daily by many people and in addition it includes certain meats in the form of the edible viscera which are usually not partaken of at all or only very occasionally. Forty-two patients have been treated by the vitamin rich, high caloric diet for from six months to two years. Most of the patients had definite symptoms of the disease for several years or many months before the dietetic treatment was started. Of the forty-two patients of the series, twenty were in their first attacks of the disease, thirteen had their second, four their third, four their fourth, and one his fifth attack of the disease. Of the forty-two patients, one has taken the diet for more than two years, one for twenty months, eight from one year to eighteen months, thirteen from six months to eleven months, and the rest for less than six months. All patients have taken the treatment for at least the first two months in a hospital. They are all alive except one, who died suddenly during the remission. No autopsy could be obtained and the immediate cause of death in this patient remains unknown. From two to three weeks after the high vitamin diet had been started, the beginning of a definite remission could be observed in every one of the forty-two patients. In two weeks the number of these cells again usually reaches the figure commonly found in the normal blood. The number of normoblasts occasionally increases during the first few days after the diet has been started, but very soon they decrease and disappear completely from the blood in a few weeks in every instance. The increase in the

red cell count and in hemoglobin varies in different patients. The patients who had several relapses seem to take a week or so longer to show onset of the remission; the ones who had their first attack of the disease begin to show an increase in erythrocytes usually after the first week of treatment. The changes in the leukocytic formula of the blood show that the leukopoietic tissue in the bone marrow is as much affected by the diet as the erythroblastic tissue. The leukopenia so commonly present in pernicious anemia disappears gradually, and during the active remission of the first two to three months after the treatment has been started, white counts above normal may be observed occasionally. The relative lymphocytosis usually found in pernicious anemia frequently disappears completely and the normal percentage of polymorphonuclears is established when the remission is complete. The subjective signs of improvement on the part of the patient are very definite. The effects of the vitamin rich diet on the symptoms of the pseudosystemic combined degeneration of the spinal cord are often very remarkable. Not only the subjective symptoms decrease or disappear completely after several months' treatment, but also objectively improvement can be demonstrated in the diminution or disappearance of the areas of hyperesthesia or anesthesia. Even the atactic, parietic symptoms decrease, and some patients who were completely unable to walk alone have improved so that they learned to walk again. While it is still too early to state that the benefit derived from that treatment leads to a permanent cure of these patients, it can be safely said that it brings about a definite prolongation of life.

#### ANTISYPHILITIC TREATMENT

Unsystematic Treatment of Syphilis. G. Milian. *Paris Medical*. March 6, 1926, 59:225.

The author declares that there has been no reduction in the number of new cases of syphilis. He encounters as many nowadays as in 1919. This is due in part to the afflux of foreigners, especially from the African colonies, where nearly every one has syphilis. But it is due in large part also to the anarchy that prevails in the treatment of syphilis, the diversity of drugs, of doses, of routes, and the length of treatment. He reiterates that physicians are forgetting what a serious disease syphilis is; they are confident that it can be easily cured and with mild courses, and they trust too implicitly that negative serologic tests imply a cure.

Sterilization with Arsphenamine. R. Prigge. *Deutsche medizinische Wochenschrift*, Feb. 26, 1926. 52:356.

The author found extremely rarely spirochetes in the brain of mice after spontaneous recovery from recurrens and never after sufficient doses of neoarsphenamine. Buschke's divergent results were due to the subtherapeutic doses he used. In such animals the spirochetes are present not only in the brain, but also in the blood. He found no indication whatever of any lowering of the immunity by arsphenamine in

mice infected with *recurrens* nor in syphilitic rabbits. LXXVIII, 420.

Enteritis from Bismuth Poisoning. O. Fischer. *Dermatologische Wochenschrift*, Feb. 20, 1926, 82:268.

Severe ulcerative enteritis developed after a course of seven intravenous injections of a bismuth preparation. The patient was a young woman with spirochetes in a throat lesion and positive Wassermann reaction. The syphilitic lesions subsided under the bismuth, and the intestinal process healed in another month. There were no manifestations of a toxic action from the bismuth outside of the intestines. Fischer theorizes that the bowel must have contained an unusual amount of hydrogen sulphid on the day of the last injection, and this entailed elimination of exceptional amounts of the bismuth through the bowel walls.

The Swift-Ellis Treatment. Further Experiences. C. Jamison. *New Orleans Med. & Surg. Journal*, 1926,

Sulpharsphenamin is preferred for this form of treatment. The treatments are given under local anesthesia (1 per cent Novocain) with the patient in a sitting position. The serum is injected with a 20 cc. all-glass syringe, positive pressure being used. Eight treatments, one per week, are given, followed by six weeks or two months of rest. Two courses at least are given, subsequent treatments depending on the spinal fluid findings. When properly done the procedure is painless. The Swift-Ellis treatment is indicated only in those cases in which other forms of treatment have not been effective. It is of greatest value in the meningeal types, and least in the parenchymatous. The importance of always making an examination of the spinal fluid before discharging a patient as cured was stressed.

The Modern Treatment of Syphilis During the Past 16 Years. E. G. French. *The Urologic and Cutaneous Review*, May, 1926, p. 314.

The author has given all preparations of bismuth produced up to date an extensive trial in clinic and private practice and has found that Phenylformitate of Bismuth is as reliable as any other in getting rid of symptoms and altering the Wassermann reaction. It has the great advantage of being painless and not producing stomatitis. Bismuth is an excellent remedy in cases which cannot tolerate Arsenobenzol compounds and is most effective in treating congenital syphilis. In many cases it is more effective than Arsenobenzol compounds. For a course 3 gr. doses of Phenylformitate of bismuth are given for twelve weeks. The product used is put up in a compressible ampoule and is convenient. The author found other bismuth preparations on the market objectionable from the point of view of producing a persistent stomatitis and pain at the site of injection in an appreciable number of cases.

Stovarsol. Paul Beutl. *Dermat. Wehnschr.* 80:582. April 18, 1925.

The author publishes his experiments using this drug in syphilis. In seven cases with primary lesions as yet untreated locally or generally, it was necessary to stop using stovarsol in two cases because of its inefficiency.

In one case after six days (5 Gm. of stovarsol) medication spirochetes could still be found and the appearance of the sore was unchanged. One injection of bismuth gave a negative spirochete finding, and the sore began to heal. In a second case, after twenty-two days (22 Gm. of Stovarsol), the sore was unchanged, but rapid healing took place after two injections of bismuth. Four other primary sores showed beginning healing after a few days' medication of stovarsol. After two or three days, no spirochetes could be found in these lesions.

Two patients with untreated gummas of the skin who had positive Wassermann reactions were given this drug. After 20 Gm. the lesions healed leaving superficial pigmented scars, but the Wassermann reaction was still positive after four months.

Patients with secondary syphilis treated with stovarsol (16 to 25 Gm.) showed a negative Wassermann reaction two to three months after the end of this course, but the blood usually became positive later. All the author's patients supported this treatment well; there was no skin eruption, no diarrhea, no changes in the urine, etc. He recommends it in cases in which arsphenamine cannot be given, but advises against its use as a prophylactic by the laity.

Treatment of Multiple Sclerosis. W. Sauer. *Klinische Wchenschr.* Jan. 22, 1926, 5:146.

The author injected small doses (0.05-0.15 Gm.) of silver arsphenamine or 0.15-0.45 Gm. of neo-arsphenamine twice a week in multiple sclerosis patients. The total amount of the former was 3 Gm.; of the latter 2.8 Gm. A 10 per cent solution of calcium chloride was used sometimes as vehicle. He had better results in these patients than in those treated with physical measures.

## Society Proceedings

### ADAMS COUNTY

March 9, 1928. This was the regular meeting of the Council of the Adams County Medical Society held at the home of Dr. W. H. Baker. The following were present: Drs. Baker, Center, Irwin, Cohen, Ericson, Swanberg, Caddick, E. B. Miller and J. A. Koch.

The minutes of the February Council Meeting were approved as published in the *Bulletin*. The secretary announced that Dr. Joseph C. Bloodgood of Baltimore had accepted the invitation of the society to come to Quincy on May 7. Because of the splendid reputation of Dr. Bloodgood and his great interest in the cancer problem, the secretary made a motion that the society sponsor a public meeting on the date that Dr. Bloodgood would be in Quincy, and that a committee of two be appointed to have charge, with Dr. C. A. Wells of Quincy, chairman. The secretary then called the attention of the Council to the fact that nearly half the speakers coming to Quincy to address the Adams County Medical Society illustrated their talks with lantern slides, and that the society has no lantern for



this purpose. The secretary has gladly loaned his own lantern for the past eight years, but that so much improvement has been made in stereopticons since the secretary's lantern was purchased some 10 years ago, that it was imperative that a better lantern be secured, to be owned by the medical society. It is also imperative that we have a daylight screen upon which projections can be made, as at the present time it cost between \$5.00 and \$10.00 each meeting to darken the Elk's Hall when lantern slide demonstrations are made during the daytime. The secretary ordered on approval a complete new stereopticon outfit together with large daylight screen, and made a motion that the Council recommend to the society the purchase of this complete outfit at a price not to exceed \$130.00. This was seconded and carried. The secretary read a communication from the State Society in regard to Health Promotion Week from April 22 to 29. A motion was carried that the secretary communicate with the State Society, asking them to send the material for the newspaper publicity during that week, but otherwise the society would follow its own plans in regard to their activities during that week. A communication from the Y. M. C. A. was read relative to the action the board of directors have taken in regard to physical examinations of members participating in gymnastics at that institution. A motion was carried that the secretary be instructed to write the board of directors a letter stating that the Adams County Medical Society recommend that all participating in athletics at the Y. M. C. A. first receive a certificate from their family physician in regard to their eligibility to same. Dr. E. B. Miller made a plea that the medical profession co-operate in a campaign for the early diagnosis of tuberculosis, and presented an outline of the activities that he had planned during the latter part of this month, provided it met with the approval of the medical society. A motion was carried approving of the plan that Dr. Miller had submitted. Following the meeting a social hour was enjoyed.

March 12, 1928, Dr. J. J. Singer, Professor of Diseases of Chest, Washington University School of Medicine, St. Louis, was the guest of honor of the society on this date. Dr. Singer gave a short talk before the Quincy Kiwanis Club at noon and at 3:15 p. m. conducted a Medical Chest Clinic at the Adams County Tuberculosis Sanitarium where about 10 patients exhibiting different chest conditions, were presented. He also demonstrated his method of bronchography. Following the clinic a dinner was held in Doctor Singer's honor at the Elks' Club Restaurant at which there was an attendance of 28.

At 8:20 p. m. the president of the society called the meeting to order at the Elks' Club Lodge Hall with 47 in attendance.

Dr. J. F. Ross presented a case report of Abdominal Pregnancy which was discussed by Drs. Center and Nickerson. Dr. J. J. Singer of St. Louis, our guest on this occasion, gave a lecture on, "The Newer Methods in Chest Diagnosis," which was abundantly illustrated with lantern slides. Dr. Singer laid great stress upon the use of x-rays in chest diagnosis, and

especially its use in conjunction with the injection of lipiodol and diagnostic pneumothorax. The discussion on his paper was lead by Drs. J. A. Koch and E. B. Miller, followed by Drs. M. E. Bitter and W. H. Baker, and finally closed by Dr. Singer himself. In appreciation of Dr. Singer's splendid address and clinic, a motion was carried that he be given a rising vote of thanks. This was followed by a motion that he be made an honorary member of the Adams County Medical Society, which was unanimously carried.

The minutes of the March Council Meeting were then read by the secretary and after some discussion were approved as read. The secretary then asked the pleasure of the society in regard to a meeting place for the clinic when Dr. J. C. Bloodgood of Baltimore would be our guest on May 7. A motion was finally carried that the meeting place for the clinic be placed in the hands of the Program Committee with power.

The meeting adjourned about 10:30 p. m.

HAROLD SWANBERG, M. D.,  
Secretary.

## COOK COUNTY

### CHICAGO MEDICAL SOCIETY

Joint meeting Chicago Medical Society and South Side Branch, February 29, 1928.

1. A Review of the Treatment of the Pneumonias of Young Childhood, Isaac A. Abt.

Discussion—Jesse R. Gerstley.

2. The Basis of the Surgical Treatment of Thyrotoxicosis, H. M. Richter.

Discussion—Chas. A. Elliott and Carl A. Hedbloom.

3. Management of Inoperable Cancer of the Rectum, Chas. J. Drucek.

Discussion—Clement Martin.

#### *Regular Meeting, March 7, 1928*

1. Some Unusual Lesions of the Gastro-Intestinal Tract Illustrated With Lantern Slides, Aaron Arkin.

Discussion—Leon Bloch, W. H. Holmes.

2. Duodenal Diverticula With Ulcer, Max Thorek.

Discussion—Milton M. Portis, Wm. R. Cubbins, Arrie Bamberger.

#### *Regular Meeting, March 14, 1928*

1. Sinus Diseases in Children, Thos. C. Galloway. Illustrated with lantern slides.

Discussion—T. J. Williams.

2. Problems of Plastic Surgery About the Head. (Illustrated with lantern slides.) Frederick B. Moorehead.

Discussion—Joseph C. Beck, Albert Montgomery.

Joint Meeting Chicago Medical and Chicago Urological Societies, March 21, 1928.

#### *Recent Therapy in Urology.*

1. "Intravenous and Oral Use of Urinary Antiseptics," H. C. Rolnick.

2. Observations and Management of Ureteral Strictures, C. M. McKenna.

3. "Foreign Proteins," Harry Culver.

4. "Vaccines," Russell D. Herrold.

5. "Medical Diathermy," Vincent J. O'Connor.

## 6. "Surgical Diathermy," Gustav Kolischer.

*Symposium on Peptic Ulcer, March 28, 1928*

## 1. Physiology of Stomach and Duodenum, John D. Koucky.

## 2. Pathology of Lesions of Stomach and Duodenum, Richard H. Jaffe.

## 3. Roentgenological Diagnosis of Stomach and Duodenum, Adolph Hartung.

## 4. The Diagnosis and Medical Treatment, Charles Spencer Williamson.

## 5. Surgical Treatment, Carl A. Hedblom.

**GREENE COUNTY**

The March meeting of the Greene County Medical Society was held in Roodhouse Friday, March 9.

Dr. Harold Swanberg gave us a very interesting and instructive lecture on the "Use of Radium in Treating Uterine Hemorrhage." The lecture was illustrated by slides and was enjoyed by us all.

Dr. H. A. Chapin gave us a paper on "X-ray in Modern Medicine." This paper was illustrated by a large number of radiograms showing interesting conditions in which the x-ray is helpful to the general practitioner.

Dr. C. D. Center, councilor for the sixth district, addressed us relative to matters pertaining to the work of the State Society and invited us to a picnic to be held in Quincy in June.

We appreciate very much the visit of these speakers and hope to have them with us again.

W. H. GARRISON,  
Secretary.

Dr. W. H. Garrison was appointed delegate to the 1928 meeting of the State Medical Society with Dr. F. N. McLaren as alternate.

**JEFFERSON AND HAMILTON COUNTIES**

The Society was called to order at Mt. Vernon, Feb. 15. Dr. J. W. Hamilton was chosen as delegate and Dr. R. R. Smith as alternate to the state meeting.

A symposium on Pulmonary Infections constituted the program:

"Pathology of Pulmonary Infections," Dr. D. W. Collier, professor of pathology, St. Louis University.

"Diagnosis and Treatment of Pulmonary Infections," Dr. Charles H. Neilson, emeritus professor of medicine, St. Louis University.

"The Roentgen Ray in Detecting Complications Following Pulmonary Infections," Dr. Leroy Sante, professor of roentgenology, St. Louis University.

"Consideration of Some Surgical Complications Following Pulmonary Infections," Dr. Chas. Vosburgh.

The papers were discussed by Dr. George Palmer and Dr. Cole of Springfield. The program and the discussions were the best and most highly appreciated by those present ever held in the history of this society. Unfortunately the condition of the weather was such that the attendance was very light, but those present were well paid for their coming and were loud in the praise of the program. This society has adopted the plan of programs that are educational and appreciate the fact that they cannot afford to miss a

meeting, and the enthusiasm and interest are remarkable.

After the program a nice luncheon was served by our official caterer which was also highly appreciated as manifested by all who took part.

J. W. HAMILTON.

**WILL-GRUNDY COUNTIES**

January 18, 1928. Doctor V. Lespinasse, Sterility.

January 25, 1928. Doctor Martin R. Broman, Treatment of Edemas.

February 1, 1928. Doctor A. J. Larkin, Every day uses of Radium.

February 8, 1928. Doctor D. C. Strauss, Surgery of Thyroid gland.

February 15, 1928. Dr. Kollisher, Modern views of Kidney disease.

February 22, 1928. Dr. J. H. Bloomfield, Toxemias of pregnancy.

The above men were down from Chicago to address the Will-Grundy County Medical Society.

Will-Grundy County Medical Society.

PAUL E. LANDMAN, Secretary,  
Joliet, Illinois.

**Marriages**

CHARLES N. DEAN, Sumner, Ill., to Dr. Jeanette F. Throckmorton of Derby, Iowa, March 1.

CHARLES BARTLETT DEARBORN to Miss Mabel Osborn, both of Mount Sterling, Ill., at Quincy, February 8.

ETHAN ALLEN GRAY to Miss Bessie Webb, both of Chicago, March 28.

JOSEPH EDGAR JENSEN, Momence, to Miss Aimee Louise Bigelow at Zewickley, Pa., February 22.

JOSEPH BOSTICK LISTON to Miss Hazel Marion Smalley, both of Carlinville, Ill., January 14.

EDWARD ANTHONY MLADICK, Melrose Park, Ill., to Miss Gladys Jayne Castans of Chicago, February 18.

JOHN E. WALTER, Waukegan, Ill., to Miss Anna Katherine Frahm of Atlanta, Ga., Dec. 22, 1927.

**Personals**

Dr. Wilson R. Abbott, Chicago, addressed the Livingston County Medical Society, March 1, at Pontiac, on "Early Diagnosis of Systemic Tuberculosis."

Dr. Irving S. Cutter will give a Mayo Founda-



tion lecture at Rochester, Minn., April 6, on "Side Lights in the Etiology of Puerperal Fever."

The Chicago Orthopedic Club was addressed, March 9, at the Crerar Library by Dr. John Albert Key, St. Louis, on "Physiology and Reactions of Joints."

Dr. Charles B. Reed addressed the Chicago Gynecological Society, March 15, 50 East Erie street, on "Impetigo or Pyodermatitis Neonatorum," and Dr. Charles E. Galloway on "Anemia in Pregnancy."

The chairmanship of the Chicago division of the Leonard Wood Memorial for the Eradication of Leprosy has been accepted by Col. Albert A. Sprague.

Dr. Robert M. Hathaway has been appointed director of the Pulaski County Health Unit. Dr. Hathaway formerly was director of the Daviess County Health Department, Kentucky.

Dr. Lucius H. P. Zeuch addressed the Medico-Historical Club at the University of Illinois College of Medicine, Chicago, March 21, on "The History of Medical Practice in Illinois Preceding 1850." Dr. Zeuch recently compiled a history of medical practice in Illinois under the sponsorship of the state medical society.

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## News Notes

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—Drs. Preston M. Hickey, Ann Arbor, Mich., and Lawrence Reynolds, Detroit, addressed the Chicago Roentgen Society March 8, Virginia Hotel, on "Roentgen Examination of the Normal Larynx" and "Roentgen Examination of the Pathologic Larynx," respectively, and Dr. Samuel J. Fogelson on "Function of the Gallbladder in Pregnancy."

—The Chicago Neurological Society was addressed, March 15, at the Drake Hotel, by Dr. Eugene F. Traut on "Diabetes Mellitus in Disorders of the Hypophysis;" Dr. S. E. Brown presented specimens of multiple melanotic tumors of the nervous system; Dr. Lewis J. Pollock spoke on "Subjective Sensory Disturbances in Peripheral Nerve Lesions."

—The Chicago Tuberculosis Institute has affiliated with the medical center at the Univer-

sity of Chicago, it is reported. The work of the institute's sanatorium at Naperville under this arrangement will be controlled by the university, and admission to the sanatorium will be through the university's out-patient department. Mrs. Theodore B. Sachs will continue as administrative head of the sanatorium.

—Every county in Illinois is requested by the state department of health to observe the program for health promotion week, the fifty-two southern counties in the state during the week of April 1-7, and the fifty northern counties during the week of April 22-28. Special health topics will be stressed each day. Physicians, clubs, churches and other organizations are requested to cooperate in bringing these subjects before the public.

—Following conviction by a jury for the murder by abortion of Loretta Enders, Dr. Amante Rongetti, proprietor of the Ashland Boulevard Hospital, was sentenced, March 9, to die in the electric chair April 13. He is said to be the first person sentenced to capital punishment in Cook County for a criminal operation, as well as the first in the county to be sentenced to die in the electric chair.

—The University of Chicago Medical Clinics and the Otho S. A. Sprague Memorial Institute have organized a cooperative program to continue the treatment and study of pernicious anemia inaugurated by the late Dr. Karl K. Koessler. Beds have been set aside in the Billings Hospital for the care of patients, and the laboratories of the institute will conduct their part of the program. A limited number of patients who cannot finance their own hospital care will be supported during the course of their treatment by the institutions engaged in the work. Dr. H. Gideon Wells is director of the institute.

—Under the auspices of the Chicago Academy of Sciences and the northside branch of the Chicago Medical Society, a series of free public lectures on medical topics is under way at the academy, Lincoln Park and Center Street, at 3:30 p. m. on Sundays as follows: "Preventive Medicine," Dr. Nathan Smith Davis, III, March 18; "Heart Disease in Childhood," Dr. Harold A. Bachmann, March 25; "Cults, Quacks and Cures," Dr. Morris Fishbein, April 1; "Tuberculosis," Dr. Ethan Allen Gray, April 15; "The

Preschool Child," Dr. Gustav L. Kaufmann, April 22; "The Prevention of Contagious Disease," Dr. Archibald L. Hoyne, April 29.

—The northside branch of the Chicago Medical Society will meet in conjunction with the Seminar Club of Northwestern University Medical School, April 5. The scientific program will include papers by Dr. James T. Case, Battle Creek, Mich., on "Clinical Application of Cholecystography and Its Evaluation Based on Operative Findings;" A. B. Kellogg, Ph.D., and Bertram Feuer, Ph.D., "Studies on Purified Principles of Squill with Moving Pictures of the Beating Heart;" Dr. Andrew C. Ivy, Grant Kloster, Ph.D., Dr. Eric Oldberg and H. C. Lueth, B.S., "Demonstration of Contraction of Gallbladder Caused by Cholecystokinin."

—The Medical and Dental Arts Club has been formally opened and a custom has been established of having a dinner and bridge party for women guests in the club Wednesday nights in connection with meetings of the Chicago Medical Society. The Chicago Laryngological and Otolological Society will meet in the club rooms on the twenty-second floor of the Medical and Dental Arts Building, April 2. The program will include "Some Bronchoscopic Observations" by Dr. Edwin McGinnis, and "Demonstration of Auditor with Remarks on Theories of Hearing" by William T. Bovie, Ph.D., professor of biophysics, Northwestern University Medical School.

—At a meeting of the council of the Chicago Medical Society, March 13, the report and recommendations of the ethical relations committee which was submitted was adopted. Among the cases was that of Dr. James T. Gregory versus Dr. Henry J. Millstone. Dr. Millstone was charged with unethical advertising; he failed to appear. The committee, after considering the evidence introduced, recommended that Dr. Millstone be expelled from membership. Another case was that of Dr. Gregory against Dr. Stamatidis D. Zaph. Dr. Zaph was charged with unethical conduct as a result of his association with "Dr. Shireson" and because he is professor of surgery at the Osteopathic Hospital and College. Both Drs. Zaph and Gregory appeared before the committee and, after listening to the testimony, the committee recommended that Dr. Zaph be expelled from membership.

—Owing to the widening of La Salle street, which would involve cutting off 14 feet of the Henrotin Memorial hospital building, it is necessary to rebuild the hospital. A campaign for funds will start May 1. The new building will be constructed behind and adjoining the present structure so that the hospital can carry on without interruption.

—Max Epstein has given \$100,000 to the building fund of the new lying-in hospital on the campus of the University of Chicago; Mr. Epstein previously endowed a clinic at the university which bears his name.

—Ground has been broken for the new \$1,500,000 Passavant Hospital on McKinlock Campus of Northwestern University Medical School at Superior Street and Fairbanks Court. The old Passavant Hospital was abandoned two years ago.

—The Lutheran Memorial Hospital, 1116 North Kedzie Avenue, is conducting a campaign to raise \$750,000 to provide a nurses' home, a children's department and to enlarge the maternity section.

—The Chicago Municipal Tuberculosis Sanitarium has opened a 225 bed addition costing \$1,000,000. The first two floors consist of all single rooms to be used for patients suffering from complications; the third floor is entirely for the care of children.

—Doctor Joseph C. Bloodgood of Baltimore, Associate Professor of Clinical Surgery, Johns-Hopkins University Medical Department and Surgeon to Johns-Hopkins Hospital has accepted an invitation to address the Adams County Medical Society at Quincy on Monday, May 7. Doctor Bloodgood is one of America's great surgeons and is an international authority on cancer.

Doctor Bloodgood will address several of the service clubs at noon, hold a diagnostic clinic in the afternoon, and will be the guest of honor at a dinner in the evening. Following the dinner he will present a formal paper on some phase of the cancer problem before the Adams County Medical Society and visiting physicians.

Arrangements are being made for a special Pullman car leaving Quincy at midnight on the 7th to convey physicians to Chicago for the Illinois State Medical Society annual meeting.



## Deaths

GEORGE EDWARD BAXTER, Jacksonville, Ill.; Missouri Medical College, St. Louis, 1899; member of the Illinois State Medical Society; on the staffs of the Illinois School for the Deaf and the Illinois School for the Blind; aged 56; died, January 22, of septic endocarditis and septicemia.

JAMES A. BUNDY, Kankakee, Ill.; College of Physicians and Surgeons, Keokuk, 1885; aged 70; died, February 3, of paralysis.

NAPOLEON B. CRAWFORD, Eureka, Ill., Bellevue Hospital Medical College, New York, 1864; member of the Illinois State Medical Society; aged 88; died, January 29, of acute bronchitis.

CHARLES NOAH DEAN, Sumner, Ill.; Keokuk (Iowa) Medical College, College of Physicians and Surgeons, 1907; member of the Illinois State Medical Society; president of the board of education; aged 48; died, March 11, at the Methodist Hospital, Des Moines, of rupture of the pulmonary artery and arteriosclerosis.

LYDIA M. DE WITT, Chicago; University of Michigan Medical School, Ann Arbor, 1898; associate professor emeritus, department of pathology, and a member of the Otho S. A. Sprague Memorial Institute, University of Chicago; assistant and instructor in medicine at her alma mater, 1898-1910; assistant city pathologist and bacteriologist, St. Louis, 1910-1912; associate Fellow of the American Medical Association and a member of the American Association of Pathologists and Bacteriologists; made contributions to the anatomy of the pancreas and the sinoventricular connecting system of the heart, and to the chemistry and chemotherapy of tuberculosis; aged 69; died, March 10, at the home of her daughter in Winter, Texas, of chronic hypertension and arteriosclerosis.

EUCLID MARSHALL DUNCAN, Marshall, Ill.; Jefferson Medical College of Philadelphia, 1872; aged 78; died, February 26, of myocarditis.

JOHN RUSSELL EASTMAN, Chicago; Rush Medical College, Chicago, 1893; served during the World War; connected with the U. S. Veterans' Bureau; aged 59; died suddenly, March 1, at his home in Evanston, of heart disease.

CHARLES WILLIS EVANS, Oak Park, Ill.; Rush Medical College, Chicago, 1886; aged 65; died, February 28, at the West Suburban Hospital, of cerebral thrombosis.

HENRY H. EVERETT, Chicago; University of Illinois College of Medicine, Chicago, 1902; a Fellow, A. M. A.; instructor in laryngology and otology, Rush Medical College; formerly on the staff of the Presbyterian Hospital where he died, February 17, of arteriosclerosis and nephritis, aged 61.

WILLIAM FRANCIS FAIRCHILD, Flora, Ill.; Louisville (Ky.) Medical College, 1890; aged 65; died suddenly, February 3, of heart disease.

BARNEY E. GARRISON, Wayne City, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1881; a Fellow, A. M. A.; past president of the Wayne County Medical Society; aged 68; died, February 18.

JOHN EVANS GERNAND, Rossville, Ill.; University of Michigan Medical School, Ann Arbor, 1894; also a druggist; aged 64; died, February 5, of heart disease.

WILLIAM JAMES HURLEY, Chicago; Chicago College of Medicine and Surgery, 1908; a Fellow, A. M. A.; formerly professor of surgery and clinical surgery at his alma mater; for many years on the staff of St. Bernard's Hospital; aged 45; died, February 13, of chronic nephritis and myocarditis.

SAMUEL ALEXANDER MATTHEWS, Chicago; University of Michigan Medical School, Ann Arbor, 1895; professor and head of the department of physiology, pharmacology and therapeutics, Loyola University School of Medicine; formerly assistant in pharmacology at his alma mater; assistant professor of experimental therapeutics, Rush Medical College; professor of physiology and experimental pharmacology, University of Kansas School of Medicine, Kansas City, and professor of physiology and experimental pharmacology, University of Alabama School of Medicine, Tuscaloosa; aged 63; died, February 19, at the Mercy Hospital, of angina pectoris and myocarditis.

ROBERT WILLIAM MCINNES, Belvidere, Ill.; Chicago Medical College, 1884; a Fellow, A. M. A.; at one time mayor; formerly on the staffs of the Highland and St. Joseph's hospitals; aged 70; died, February 25, of pneumonia.

JAMES A. MITCHELL, Ursa, Ill.; College of Physicians and Surgeons, Keokuk, Iowa, 1881; aged 73; died, February 14, of carcinoma of the lung and sacrum.

JAMES THOMPSON REA, Chicago; Milwaukee Medical College, 1908; member of the Illinois State Medical Society; aged 64; died, February 23, of septicemia, following an infected wound of the finger, accidentally self-inflicted.

WILLIAM H. RENOIS, East St. Louis, Ill.; University of Vermont College of Medicine, Burlington, 1866; aged 83; died, January 31, at St. Mary's Hospital.

RICHARD MORRISON ROACH, Chicago; Jenner Medical College, Chicago, 1904; University of Illinois College of Medicine, Chicago, 1906; member of the Illinois State Medical Society; on the staffs of the American and Illinois Masonic hospitals; aged 55; died, March 2, of acute dilatation of the heart and gastritis.

ANTHONY RUD, Chicago; Chicago Medical College, 1891; a Fellow, A. M. A.; on the staff of the West Suburban Hospital; aged 65; died, February 23, at Orlando, Fla., of myocarditis.

FRANK TURNER, Heyworth, Ill.; Rush Medical College, Chicago, 1893; member of the Illinois State Medical Society; aged 59; was instantly killed, February 19, when the automobile in which he was driving was struck by a train.

ADAM C. ALBRIGHT, Danville, Ill. (licensed Illinois, 1882), aged 69; died, February 29.

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# Illinois Medical Journal

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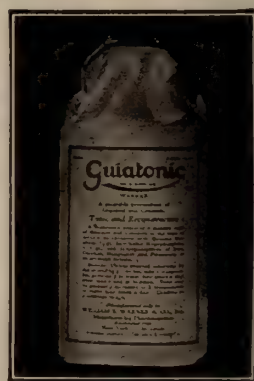
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# ILLINOIS MEDICAL JOURNAL

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No. 5

## ILLINOIS MEDICAL JOURNAL

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## Editorial

### AMEND THE BY-LAWS OF THE A. M. A. IN THE SECTION HAVING TO DO WITH THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

To conform to progress in civilization there has ensued a demand for different methods in medical education and hospital conduct.

To combat competitive medical practice from universities, foundations, lay-bodies and other endowed organizations entering into unfair rivalry with individual physicians there has arisen a need for a remedial code to counteract the effect of existing impracticalities and inefficiencies in the administration of medical education and the conduct of hospitals and of similar and affiliated institutions that by their inherent deficiencies prohibit the dispensing of the greatest possible good to the largest proportion of the sick and ailing public, in the most reliable and scientific fashion.

The council of medical education and hospitals of the A. M. A. consists of seven members. The term of each member runs for seven years. Changing character of our modern civilization demands different methods of medical education and hospital conduct.

The House of Delegates of the A. M. A. has practically surrendered all initiative in medical and nursing education and the standardization of hospitals. The medical profession is standing by, seemingly helpless, as foundations and universities, for the most part under lay supervision, direct matters of the most vital importance to medicine.

The course in medicine begins two years before the medical school takes full control. After four years instruction there follows at least one more year in the hospital, and all this under the jurisdiction of a "council" that "reports" to the House of Delegates all in a substance and man-



ner that have varied but little from year to year for the past twenty years.

If the standardization of hospitals had been thoroughly and efficiently done as only the A. M. A. is qualified to do this work, a full score of self appointed "meddlesome Matties" would not now be cluttering up this field.

An amendment to the by-laws concerning the manner of approval of the personnel of the council on medical education and hospitals will come before the House of Delegates at the Minneapolis session. If adopted, this change in the by-laws will have the effect of restoring to the house of delegates some degree of control of the most vital problems before the profession. The house of delegates owes it to the profession at large and to the public, to awaken to its duty in this matter.

In order to effect this indicated change it would seem best to use as the remedial instrument the Council on Medical Education and Hospitals through a rotation in its personnel that will change this body from a committee in perpetuity into a committee in alternation. Such a change will tend to make of this committee a governing body of the greatest flexibility, efficiency, practicality and progressiveness.

There is an almost universal cry for new blood in the Council on Medical Education and Hospitals. From many quarters comes the expression of the opinion that continued service on any committee tends to produce a stasis of progress; that prolonged and identical duties of members cause in some instances a lack of acute contact with medical affairs and individuals and often also an indifference to the modern view point of medical needs and progress.

There is no doubt that there is a tendency to a more limited generality of perspective when without interruption the same few continue to represent the viewpoint of the many as this unpreventable development into an oligarchy invariably creates dissatisfaction of the majority against the noninterruption of the minority rule involving a lack of rotation in judiciary and ultimate decision and an ultimate czaristic control. For the good of the profession and the public and the individuals themselves it would seem that

it would be best to concur in the following proposed amendment to the by-laws:

#### NOTICE OF A PROPOSED AMENDMENT TO SECTION 1 OF CHAPTER VIII OF THE BY-LAWS

*Resolved*, That Section 1 of Chapter VIII of the By-Laws be amended as follows:

*Strike out the following sentence:*

"The Council on Medical Education and Hospitals shall consist of seven members each elected for seven years;"

*and the following phrase:*

"except that in 1925 three members of the Council on Medical Education and Hospitals shall be elected by the House of Delegates;"

and insert in the first sentence, after the word "ASSEMBLY," the following:

"but excepting the council on Medical Education and Hospitals;"

and insert in the first sentence, after the word "COMMITTEE" where it first occurs, the following:

"except the Council on Medical Education and Hospitals;" and insert after the word "COUNCIL," at the end of said section, the following paragraph:

"The Council on Medical Education and Hospitals shall consist of six members, two of whom shall be elected each year for a term of three years immediately following election. Elections shall be by the House of Delegates, from nominations submitted by the President. For each vacancy to be filled, the President shall nominate two Fellows, for action by the House of Delegates at the time of the election of officers as fixed by the by-laws. No Fellow shall be eligible for election for more than two consecutive terms under the provisions of this section as hereby amended. *PROVIDED, However*, that in 1928 the President shall submit nominations for the election of two members to serve for one year, two members to serve for three years, and two members to serve for three years, and members shall be elected accordingly.

The purpose of this amendment is—

1. To limit the membership of the Council on Medical Education and Hospitals to Six members.
2. To limit the term of each member to three years, with a provision that no member of the Council shall serve more than two consecutive terms.
3. To require the nomination of two Fellows for each vacancy.
4. To permit the House of Delegates to choose between the Fellows so nominated.

The adoption of this amendment will abolish the terms of all members of the Council in 1928 and permit the entire reorganization of the Council at that time.

## RURAL DISTRICTS AS WELL AS CITIES FEEL THE ABUSE OF MEDICAL CHARITY

### THE DANGERS OF SOCIAL WELFARE

Dr. Albert E. Bulson, Jr., editor of *The Journal of the Indiana State Medical Association*, writing in this periodical for April, 1928, under "The Dangers of Social Welfare," reiterates clearly the need for protection against many of the evils against which the ILLINOIS MEDICAL JOURNAL is constantly crusading and sets forth plainly the fact that in rural districts as well as in the cities the abuse of medical charity prevails.

Dr. Bulson writes ably and in part:

Not only do we have to fear the growing tendency toward the establishment of so-called state medicine, which term interpreted means the furnishing of all medical and surgical service by municipal, state, or federal agencies, and at little or no expense, no matter what the social or economic status of the recipient may be, but we also have to fear the inroads that are being made upon the private practice of medicine by the work of a variety of welfare agencies that originally started out to render service to the indigent and the deserving poor, but have so broadened their activities that they include not only all who seek their service but all who can be induced by any specious plea to accept it.

Most of these welfare agencies started out with laudable purposes and good intentions; many of them originated by philanthropic laymen with an "I am my brother's keeper" idea in the forefront, and with the endorsement and even active support of some of our most reputable and talented medical men who believed that it was right and just that the deserving poor should have the very best medical care and attention for their ailments, and that perhaps welfare organizations offered the most practical manner of securing the results. These enterprises flourished and in the beginning did a very commendable work, but as some of us predicted, they soon expanded and enlarged their sphere of usefulness by abandoning restrictions and accepting all who presented themselves for attention and asking no questions. Eventually mild protests came from medical men concerning the change of policy, but the welfare organizations, sleek and prosperous from liberal donations wheedled out of well-meaning philanthropic individuals, became arrogant and replied that if those medical men who had been giving support to the enterprise did not care to cooperate then the organization would find other physicians who would. And they did! Younger men, desiring experience and a living, or older ones who desired to maintain the questionable prestige derived from connection with these agencies, sold their souls for a mess of pottage. The well-paid manager, secretaries, and attendants dictate the policies, and the

physicians, giving of their time and talents gratuitously or for niggardly compensation, dance when the whip is cracked.

Some of these so-called welfare agencies do not give any accounting of the funds donated by well-to-do philanthropic persons, or if they do give an accounting it is a distorted and untrustworthy one. It is but natural that the commercial possibilities of such a program would be seen by some of those acquainted with the workings and the ease with which the very necessary service of the medical profession can be secured, and in consequence there developed the purely commercial organization parading under the name of a welfare organization and presumably having the patronage and support of well-to-do philanthropists. One of these institutions that we know about was promoted by a frank statement to the effect that all of the people are entitled to the very best medical and surgical attention procurable, and that through organization and proper financing such could be given to the people not only at a very low cost but with adequate return to those financing the project. Originally the enterprise started out with the idea that all applicants for service would be charged fees consistent with ability to pay and on this basis a few reputable physicians, most of them well established socially and economically, gave their endorsement and support. They found comfort and a certain cheap kind of glory in being advertised as sponsoring such a worthy (?) object. However, it was not the intention of the promoters to do anything more than get started under such favorable circumstance before resorting to rankly commercial methods to practice medicine on the department store style. The reputable medical men connected with the institution became disgusted and resigned, but the enterprise has not encountered the slightest difficulty in finding younger and even capable men who are willing, at niggardly salaries, to work in order to make a living, or in the vain hope of gaining experience and of establishing a professional reputation. From more or less modest advertising in the lay press and before various civic organizations the plan of getting business turned into that of personal solicitation through an adroit system of nurse-inspection. This resolved itself into visits to the private homes where illness was reported or suspected, and in personal interviews on the street or in offices and places of business. Even the periodic examination stunt has been worked to a finish in securing patients, and ministers and churches have been among the most gullible in accepting what was offered as a godsend to the sick and afflicted. Reputable and established physicians not connected with the enterprise have noted that their patients actually were solicited by the welfare organization to become patients and take advantage of the so-called "complete service" at low cost. The quality of service rendered deteriorated, as would be expected under such a system, but has been made good enough to satisfy the general run of people, and in consequence the enterprise flourishes from a commercial standpoint. The reputable men of the community have been forced to



see the size of their practices and incomes dwindling. They still retain their patronage among those well-to-do who rather scorn things that are cheap, but there are always enough people, many of whom are well-to-do, who are willing to attempt to get something for nothing, and in the final analysis the continuation of the welfare clinic spells disintegration of the medical profession in general and a lowering of the standard of scientific medicine.

What has happened in the actual instance cited can happen in any community, and in fact is happening in ways that are analogous to the one described though perhaps less fully developed. "Well, what are you going to do about it?" someone asks. Nothing—except to point to "the hand-writing on the wall," as we have been pointing for so many years, and putting forth every effort to influence reputable medical men individually and collectively to stop giving endorsement, comfort, or aid to any of these welfare enterprises, organized and sponsored by laymen, and for the most part conducted by well-paid lay managers, secretaries and others who have warped consciences and little or no respect for physicians except to use them as menials. Never in the history of the world has regular medicine ever refused charity to the indigent, or exhibited an unwillingness to render professional services to the deserving poor for fees consistent with the ability of the patient to pay. In spite of this, no class of people following any vocation has ever been more imposed upon than physicians. This is true in connection with services rendered many individuals in times of sickness or distress, but is also true in connection with all of the various worthy and unworthy welfare movements. We believe that it is high time that the whole subject of medical charity of every kind and description shall be taken over and managed in its entirety by the medical profession, with the aim in view of giving the best possible service to the indigent, without money and without price, and all others at fees consistent with the ability of the patient to pay. It must be divorced from lay control or domination insofar as medical service is concerned. In carrying out this plan it will be necessary to reprimand and even penalize those physicians who have so lost their self-respect and their knowledge of what is necessary for their own economic advancement or salvation as to listen to the pleas of or accept offers from any of the various organizations conducted under whatsoever specious object, who would destroy the professional standing and independent economic position occupied by medical men.

We offer this prediction: that unless the medical profession awakes to the dangers that threaten, it will not be ten years before the majority of the medical men of this country will be occupying little better than clerical positions, and with clerical incomes, and scientific medicine for the masses will have greatly deteriorated as a direct result of the loss of independence, incentive and self-respect of the individual physician.

(Note.—In addition to Dr. Bulson's article it is of interest to read of his appraisal of

affairs of the same sort in far off Honolulu as well as in Southern California, as stated in a letter written by Dr. Bulson to Dr. Emmet Keating and which the latter has been kind enough to let us have for publication.)

Do not get the idea that the particular clinic referred to in my letter was found here in Indiana, though we have something that approaches it. I suppose every populous community has the "makings" of some such clinic as that described which actually exists in another city, and for that matter in a variety of forms in many cities. I got my inspiration from Honolulu and again in southern California during the past winter. Medical affairs in Honolulu as well as in Los Angeles are in a rotten condition. Unless we do something to head off these Welfare workers we are going to have a rotten condition of medical affairs in many places in the Middle West. In other words, the abuse of medical charity is getting to be a real business, and in almost every populous community medical charity is aiding in producing dependency and loss of self-respect on the part of a class of people who cannot be considered indigent.

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#### MICHIGAN DOCTORS ARE DISSATISFIED BY PRACTICE OF MEDICINE IN THEIR STATE BY THE UNIVERSITY OF MICHIGAN UNDER THE PAY CLINIC SYSTEM

Socialized medicine as exemplified by the workings of paid clinic practice through the State University system as it is followed in the State of Michigan should be warning enough not to attempt any analogous duplication of such procedure in the State of Illinois as is the tendency through the present plans for paid clinics at the University of Chicago.

Doctors in Michigan are greatly dissatisfied at this octopus that has been thrust upon them by theorists. Attention has been brought to the Michigan situation and its tangency upon the present Illinois crisis through statements made by Dr. Franklin McLean, dean of the medical department of the University of Chicago. During a conference on Sunday, March 17, 1928, at the University of Chicago participated in by a delegation of trustees of that institution and a committee from the Chicago Medical Society. Dr. McLean, in citing the virtues of the paid clinic idea and its forthcoming advantages for idea in Michigan and its application through the paid clinic as a shining example of what would accrue to Illinois and to the medical profession in the way of practical and scientific benefit if

the same system prevailed here. In his eulogy of the harmonious workings of the idea in Michigan and elsewhere Dr. McLean said that the doctors in the state of Michigan approved the paid clinic, state university idea. As a matter of fact the rank and file (exclusive of the payroll brigade) of the profession in Michigan is not only dissatisfied with the working of the system, but in reality is bitterly against it.

Dr. McLean's statements before this meeting were so at variance in so far as Michigan is concerned at least, with the writer's experience in that state, dating back to the time when an attempt was made to inflict compulsory health insurance on the medical profession of the United States that it is impossible not to refute these assertions by a few citations of record. In 1920 a cry for help came to the doctors in Illinois from the doctors in Michigan. Assistance was asked from those who knew of the bogus character of "state medicine" under the guise of compulsory health insurance in an educational campaign that would show that the new idea was a wolf in sheep's clothing and worse. To this end such men of sane perspective and actual cognizance of the workings of compulsory health insurance as Drs. Edward H. Ochsner and George Apfelmacher of Chicago and W. D. Chapman of Silvis appeared on the program at the meeting of the Michigan State Medical society, April, 1920, in response to this demand and explained some of the inevitable dangers of compulsory health insurance and state medicine in any form. These three men are all close students of this devastating problem.

The rank and file in Michigan at that time were absolutely opposed to any system of state medicine. Feeling that this attitude had not been changed an immediate investigation was made of Dr. McLean's assertions and our idea sustained as can be seen from these citations.

Among other comments received were these from Dr. V. L. Van Duzen and James G. Sipe (Attorney at Law) of Detroit, Michigan, respectively secretary and executive secretary of the East Side Medical Society and Dr. E. C. Baumgarten of Detroit.

In part Mr. Sipe says, speaking from the legal standpoint:

"The East Side Medical Society in its investigations, made the following findings:

"First: That there is a definite trend towards

State Medicine, which manifests itself through over-zealous health and charity workers, and misinformed and neglected legislation.

"Second: That the private practicing physician and surgeon is in direct competition with public, salaried doctors, nurses, public health workers and state hospitals.

"Third: That the profession has been misguided by an antiquated code of ethics.

"Fourth: That the solution is organization and inter-harmony to protect the public against charlatanism, and the medical profession against imposition.

"The following statement will summarize and in a way enlarge upon the statements heretofore made. The Society acting through committee, found the State, County and City Boards of Health treating all types and conditions without regard to financial responsibility.

"Over-zealous Board of Health and School nurses soliciting cases for treatment.

"Use of State Hospitals for care of others than the indigent, and cutting fees making competition prohibitive.

"Lack of cooperation between the Boards of Health and the physician.

"Trend of legislation against the private practicing physician.

"The 1927 Legislature passed sufficient laws to make State Medicine possible in the State of Michigan, a few of them are briefly:

"1. Act 207 of the Public Acts of 1927. An act to organize the State Psychopathic hospital at the University of Michigan—control of the hospital in a board of trustee—to make rules fixing charges to be made against private patients or may make special contracts for the care of same,—board may also organize dispensaries and mental hygiene departments for the examination, treatment and maintenance of patients, in any city or community of this State; and may make such provision as may be deemed necessary and expedient for the prevention of mental disease and the preservation of mental health, etc.—patients divided into two classes for admittance—those able to pay and those unable to pay.

"2. Act of 236 of the Public Acts of 1927. An act to declare the policy of the State of Michigan with reference to cripple children; and to provide for their registration, examination, diagnosis, treatment, convalescent care and education. Briefly the acts contain the following:—

"(a) A cripple child includes persons from birth to the age of 21 years.

"(b) Defined as one whose activity is or may become restricted by loss, defect or deformity of bones or muscles as to his or her normal capacity for education and self support.

"(c) The sum of five cents to be paid to school census enumeration for each crippled child reported.

"(d) Commission to arrange for a County Clinic in each County for examination and diagnosis. There shall be at least one clinic in each County annually.

(e) Examination and diagnosis by an Orthopedic



surgeon selected by the commission. Manner of treatment to be recommended by said Orthopedic surgeon.

"(f) People to be charged who can afford to pay and surgeon to receive a *reasonable fee*.

"(g) Out Patient Department—Follow up Supervision on all cases diagnosed at County Clinics.

"(h) University of Michigan Hospital at Ann Arbor designated for the purpose of carrying out the provision of this act.

"3. Act 306 of the Public Acts of 1927. An act to provide for County Health Departments. The Board of supervisors of any county may provide for a county health department. The jurisdiction to be county wide except in cities having a full time health officer; except that such cities may elect to join with the county in the organization.

"4. Act 309 of the Public Acts of 1927. An act to provide for the physical examination of drivers of motor vehicles. This act requires drivers of public vehicles carrying passengers to have a physical examination and allows the Doctor to charge the handsome fee of 3 dollars or less.

"You have perhaps already noted, from the facts so far, that State Medicine is a reality in Michigan. Nothing else remains to be done in the way of legislative enactment. It is just a matter of time.

"In the City of Detroit, the Community Fund, by public subscription, collected \$3,000,000 to be disbursed for charitable purposes. The Board of Health requested \$4,600,000 for its maintenance for the year 1928, and the welfare commission requested \$4,500,000 for the year 1928, making a grand total of \$12,100,000 of which a small portion would care for the really indigent patient and cover the cost of the Board of Health, if it would limit its activities to preventive medicine and contagious diseases. These figures are exclusive of private charities such as the old newsboys fund and numerous privately maintained clinics. There are 1,400 doctors in the city of Detroit, whose average income would be about \$8,000, whose total gross earnings would be \$10,400,000. Obviously, this gross figure is considerably less when the expenses and numerous demands incident to the practice of medicine are deducted.

"We find our State Hospital in Ann Arbor operating at cut-rate, at prices which prohibit competition and on persons who are well able to pay a fair charge. It is our purpose to limit all of the mentioned organizations to the care of indigent cases only."

Which is corroborated by Dr. Baumgarten in part as follows:

"I was very much interested in your inquiry in regard to our State University and the activities of various agencies in relieving the physician of his practice. We in Detroit are of the opinion that things are progressing to the point where some concerted action on the part of medical men must be taken.

"The East Side Physicians Association of Detroit,

representing about five hundred physicians of which I am President has taken a very active interest in this matter during the past year and has succeeded in stirring up considerable sentiment among the profession in this neighborhood.

"There were passed last year in the last legislature eight laws pertaining to medical practice, four of which we believe are especially vicious. I would like to mention each one of these and call your attention to things which might escape casual observation.

"First, the statute governing the examination of licensed drivers. The object of this of course is excellent but it was sponsored by a man who has some grievance against the medical profession and to retaliate the limit of the fee for a complete physical examination was set at three dollars, thus limiting by law the fee which may be charged. We believe this to be a bad precedent, and as so often happens the object of the law was at once defeated because many of the irregulars at once advertised that they would be glad to do the examination for one dollar and obviously such an examination means nothing.

"Second, the statute making possible the establishing of county health units by the state board of health. On the surface this seems to be a very laudable action, because it does not provide any facilities for clinical work, but in searching for the "nigger in the woodpile," we found that way back in 1913 a law was passed which provided for county hospital units financed by each county and under the supervision of the state department of Health. So you see the teeth were the first part of the development of this child and the body came much later. A good bit of the energy was taken out of this bill however by the action of the Wayne County Medical Society, which voted almost unanimously against the adoption of the measure and sent a copy of the resolution to every county society in the state with the result that all but a very few have voted the thing down. This was possible because the commissioner made the statement that he would not establish a unit anywhere, where the medical profession was opposed to it.

"Before taking up the other two statutes which deal with the University of Michigan let me say that it is the general opinion of the medical profession here that this institution is the most difficult and at the same time the most urgent problem we have to deal with. The activities of the cults and paths, etc., is a mere trifle compared with this, because it is the type of competition it is most difficult for the profession to meet. Their means of publicity are not limited by same shackles of ethics the rest of us must submit to and their personnel is most capable. An investigation was taken up by our State Society last year and a preliminary report was published in the July number of the Journal. A final report will be given at our next meeting here in September. My personal view, and I believe I am expressing the opinion of the profession at large, is that I am opposed to anything at Ann Arbor over and above the requirements of a teaching institution and the care of the indigent poor of the state.

*"Next the statute pertaining to "Mental Hygiene." This makes it possible for the establishing of "mental hygiene" stations anywhere in the state supervised solely by the authorities at the university. Fine. But did you ever stop to think of the possibilities of the term mental hygiene? The law includes anyone who may at any time be subject to conditions which may affect the mental efficiency. Anyone who has syphilis in any form is certainly a prospective "customer." A child, backward in school because of physical defects etc., can be treated in these clinics and what not without limit.*

*"Lastly the orthopedic bill. This I believe is the most vicious of all because it carries with it an immediately available appropriation of \$50,000. This bill makes it mandatory to do a lot of things. First the school authorities must report every crippled child for which they receive compensation. And it goes without saying that every cripple or near cripple will be reported. It is mandatory for the commission to hold a clinic in every county in the state once a year. The commission has power to say who is going to treat these cases, and since the mayor of Ypsilanti was appointed commissioner and the meeting for the organization was recently held in Ann Arbor, I leave it to you to judge who is going to treat them.*

*"Of course they say the bill provides that patients in this group may be sent to any hospital having an orthopedic surgeon and facilities to handle them but that is one of the things that never happens.*

*"We are having considerable trouble with our free clinics here also but those are purely local matters and I will not bore you with them, but I will say that I have watched with some interest your own activities and have marvelled for a long time that it all seems to pass unnoticed.*

*"I have written you thus fully because it is a subject in which I am intensely interested and never lose the opportunity to arouse a similar feeling in others."*

And further elucidated by Dr. V. L. VanDuzen, secretary, who says over his own signature in commenting upon the society's meeting at the Battle Creek Sanitarium, January 5, 1928:

*"Because of your absence you missed a committee report which stirred up more enthusiasm than we have ever seen before at any of our meetings. When about one hundred doctors were each trying to give fifty dollars to the secretary at one time, you will believe us when we say that there was a great display of enthusiasm. Now this committee report dealt a death blow to a grievance of long standing which we have been individually protesting for years, namely—State Medicine. The report showed that state medicine is not a thing of the future but is here in actual practice."*

*"In 1927 the state legislature of Michigan passed eight new laws affecting state medicine and making state medicine a reality. We knew nothing about these laws until our newly appointed legal department brought them to our attention."*

The last statement is pregnant with the sig-

nificance of the danger of medical indifference to state legislation.

The medical profession of Michigan has our sincere sympathy and are deserving of our moral support, our best information is that organized medicine in Michigan is absolutely in the hands of state paid officials both university and health boards. In spite of the gallant fight made by some of the leaders of the profession in Michigan in 1920 against the invasion of the compulsory health insurance octopus and their alertness to the dangers of the oncoming menace, the state medicine advocates have somehow continued to keep boring in until today Michigan is getting it all to the ninth degree and all in the name of an alleged suffering public which is to be made sick even if it isn't.

#### IT HAPPENED IN MICHIGAN BUT IT COULD NOT OCCUR IN ILLINOIS

Advocation of analagous anti-medical legislation in Illinois, in any degree—whether of one bill or of forty bills—would be noticed immediately upon such introduction by scores of medical men, mounting into the hundreds in fact, and measures would be taken immediately to combat this general menace.

Illinois State Medical Society has a wide-awake legislative committee, aided and abetted in its general alertness against these evils by practically every member of the society. Again, it is the personal touch that counts.

To the bystander at large it would appear as if the State of Michigan were well on its way, far and above any of the other states, to a program of socialized and state medicine. This is due of course to the control of the machinery of the state medical society in Michigan by the state department of health, and the interference by the state university hospital with the prerogatives of the medical profession through the hospital's competitive practice of medicine. This is possible by placing upon the individual taxpayers the burden of partially paying for the necessary overhead met with in caring for the sick and infirm.

If this is logic and good economics the scheme should be carried further and result in the taxpayer paying partially for clothes, food, rent and other requisites of patients able to pay.

Organized medicine in Illinois functions to



prevent just such professional handicaps and legal atrocities as are indicated in this excerpt from an article in *The Bulletin* of the Wayne County (Mich.) Medical Society: Protection against just such injustice is one of the results of the diligence exerted by the Illinois State Medical Society in behalf of the membership.

"The need for better representation of the medical profession wherever lawmaking bodies convene, becomes quite obvious when it is noted that during the year just passed, at least eight new laws, each of such a nature as to curtail the activities of the regular medical practitioner, have been enacted by the legislature without the knowledge on the part of the profession, of what they were all about.

"This situation gives but a faint idea of the effort being exerted toward legislating the profession in one way or another, and it seems high time that medical men take an active hand in the proceedings, lest they be legislated entirely out of the picture."

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#### MARRIAGE MUST NOT INEVITABLY DISAPPEAR AS THE BASIS OF FAMILY RELATIONS

Matriarchy as the only provable, indisputable parental relation was urged for adoption before the Pan-American Child Congress at Havana, Cuba, on Dec. 10, 1927. This idea was included in the expressed desire to abolish paternity as a legal status. So cabled the Associated Press, a news-gathering association noted for conservatism and accuracy.

Dr. Carlos Pineiro, official Cuban delegate, was quoted as saying that the injustice of differentiating between the offspring of married and of unmarried women was obvious since the only difference was in the one case the supposition of conjugal fidelity. The doctor argued that since it is neither legally nor biologically possible to prove paternity that legal standing thereof should be annulled. "Marriage must inevitably disappear as the basis of family relations," Dr. Pineiro continued. "Anyway nature has given the mother predominant functions in the creation of the child."

From Peru's official delegate, Dr. Caroles E. Paz Soldan, came protest. "That theory would wound the moral sensibilities of America and upset social conditions."

While congratulating his confrere upon his courage to so state his convictions, Dr. Paz Soldan added that the idea was not only utopian but also impractical.

This contention the Peruvian backed up by commenting upon unpleasant post-war results in Europe hinging upon the moral sophistries that were then so usually prevalent.

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#### BIRTH CONTROL AND CRIME

The birth control fadists advance the theory that control and suppression of crime lies in control of the birth rate. Dr. Edward N. Ewer, president of the California State Medical Society, points out that crime in every form has greatly increased in the last thirty years, and that in that time the American birth rate has declined thirty per cent.

To argue that the birth rate has anything definitely and specifically to do with crime is equal to contending that large families supply the criminals.

The Chicago Crime Commission in a report some few years ago showed that nothing could be farther from the truth than that large families are inductive to criminology, in fact the exact reverse is found to be the case.

It is conceded that there is a community of interest and a mutual helpfulness in large families that have a steadying influence. Home conditions have a great deal to do with the breeding of criminals, but the size of the family has nothing to do with it.

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#### MEDICAL ADVERTISING SOLICITOR WANTED

The Illinois Medical JOURNAL desires one or more advertising solicitors. Persons with medical advertising experience preferred. No guaranteed salary. Compensation on commission basis only.

ILLINOIS MEDICAL JOURNAL,  
185 N. Wabash Avenue, Chicago, Ill.

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#### ANNUAL CONVENTION OF THE CATHOLIC HOSPITAL ASSOCIATION

The 13th Annual Convention of the Catholic Hospital Association of the United States and Canada and the Second Annual Hospital Clinical Congress of North America will be held in the Cincinnati Music Hall, Cincinnati, Ohio, June 18-22, 1928. The Fourth Annual Convention of

the International Guild of Nurses will be held at the same time, in the same building, at night meetings.

This Convention and Congress will be one of the largest and most important hospital meetings of the year and will comprise general scientific meetings, special clinics or demonstrations of hospital departments, and three hundred special commercial and educational exhibits. Outstanding authorities in medicine, surgery, pathology, nursing, dietetics and hospital administration, architecture and engineering will lecture and demonstrate in specially planned clinics representing the various departments of the modern hospital. A professional program of the highest interest and value is now being formulated, and all persons interested in medical and hospital service are cordially invited to attend. Further information may be obtained from John R. Hughes, M. D., Dean of the College of Hospital Administration, Marquette University, Milwaukee, Wisconsin, who is General Chairman of the Convention and Congress.

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### SUMMER CLINICS

*Chicago, June 18 to 30*

Arrangements are about complete for a two weeks' course of Practitioners' Clinics to be held in Chicago, June 18 to 30, under the auspices of the Chicago Medical Society. These clinics, more elaborate than those held in previous years, will provide for our guest's entire day, and the whole two weeks may be devoted to the pursuit of one specialty or a different branch of medicine or surgery may be selected each day.

Clinics begin at 7 a. m. or shortly thereafter, and with changes of teachers, will continue through the whole morning. Surgical work will be going on on one floor, medical on another and pediatric or throat clinics on the next. A large number of cases, covering a wide range of conditions, all in the same specialty, will be available.

The afternoons will be devoted to ward walks, laboratory demonstrations and researches. Post-mortems will also be studied at this time. The groups must necessarily be limited to only so many as can properly be cared for by each clinician in the walks and admission will be by card only.

Obstetrical work will be demonstrated by actual

deliveries and by movies of the more uncommon conditions (patients requiring version or cesarean section are not always available. Afternoons will be devoted to ward walks and to pre-natal and post-natal clinics.

This plan makes possible, without any loss of time, for a change of specialty each day and of witnessing the work of any particular clinician in whom the visiting practitioner is interested. An information booth will be maintained at the office of the Chicago Medical Society and also at the hospitals, where from 8 a. m. to 4:30 p. m. each day guests may learn what work is being conducted in each institution that day or the following day.

These clinics begin Monday following the meeting of the A. M. A. and continue for two full weeks, except Sunday. A registration fee of \$10.00 is charged for the course. Secure your reservations by communicating with the Chicago Medical Society, 185 N. Wabash Ave., Chicago.

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### EDUCATIONAL COMMITTEE ASSISTS COUNTIES IN OBSERVING HEALTH WEEK, APRIL, 1928

Eighty-one physicians spoke before lay audiences, including high schools, men's and women's clubs, union meetings of churches, and Parent-Teacher Associations. Some of these groups planned special health programs to observe health week as proclaimed by the Governor. The Committee scheduled speakers for every service club and high school in one of the counties in the state.

Twenty-four speaking appointments were made for the first week of May which is known as National Baby Week. These speakers will talk on such subjects as "Mental Hygiene of Childhood," "Good Food Habits for Children," "Early Detection and Correction of Defects in Children," "Shock Troops Against Diseases," "Eye, Ear, Nose and Throat Conditions in Children," and the Dental Society is scheduling dentists to talk on "Good Teeth for Children."

Fifteen radio talks were given over stations WGN, WJJD, WEBH and WLS.

Thirteen poster exhibits were loaned to schools.

Nine health films were secured for organizations.



Nine hundred and twenty-eight health education articles were released to newspapers.

One thousand nine hundred and seventy notices were sent to all newspapers in the state regarding the annual meeting of the Illinois State Medical Society. News items were also sent out about the lectures sponsored by the North Side Branch of the Chicago Medical Society and the Academy of Sciences, and about the special meeting in Quincy, May 7.

MAKE A. M. A. HOTEL RESERVATIONS  
EARLY, MINNEAPOLIS, JUNE 11-15

Those who expect to attend the annual session of the American Medical Association to be held at Minneapolis, June 11 to 15, will do well to make hotel reservations as soon as possible in order to secure satisfactory accommodations for themselves and to make it easier for the Subcommittee on Hotels of the Local Committee of Arrangements to provide accommodations for those who may be compelled to delay making reservations. The chairman of the Subcommittee on Hotels, Dr. F. G. Benn, 1114 Donaldson Building, Minneapolis, reports that there is an abundance of room in good hotels and that satisfactory accommodations may be secured through that committee.

The Committee on Hotels of the Local Committee of Arrangements desires to assist you in making your room reservations and has compiled a list of hotels, which has been approved by the Minneapolis Civic and Commerce Association and the Hotel Association.

HOTELS AT MINNEAPOLIS

Names and Addresses	Single		Double	
	Without Bath	With Bath	Without Bath	With Bath
Andrews .....	\$2.00	\$2.50	\$3.00	\$4.00
Hennepin Avenue and Fourth Street	-2.50	-6.00	-3.50	-7.00
Bedford .....		\$1.50	....	\$2.00
1501 La Salle Avenue		-3.00		-4.00
Buckingham .....		\$2.50	....	\$4.00
La Salle Avenue and Fifteenth Street		-3.50		-6.00
Camfield .....	\$1.25	\$1.50	\$2.00	\$2.50
Marquette Avenue and Eighth Street		-1.75		
Curtis .....		\$2.00	....	\$3.00
Tenth Street and Fourth Avenue S.		-3.00		-6.00
Dyckman .....		\$2.00	....	\$4.00
Sixth Street between Hennepin and Nicollet Avenue.		-5.00		-7.00
Elgin .....	\$1.00	\$1.50	\$2.00	\$3.00
Hennepin Avenue and Eighth Street			and up	and up
Francis Drake .....		\$2.50	....	\$3.50
Tenth Street and Fifth Avenue S.		-5.00		-6.00

Hastings .....	\$1.75	....	\$2.50	
Twelfth Street and Hawthorne Avenue	-4.00		-5.00	
Leamington .....	\$2.50	....	\$3.50	
Third Avenue S. at Tenth Street	-4.50		-6.00	
Majestic .....	\$1.00	\$1.50	\$1.75	\$2.50
Seventh Street and Hennepin	-1.50	-2.00	-2.00	-3.00
Maryland .....	\$2.00	....	\$3.00	
La Salle Avenue and Grant Street	-2.50		-3.50	
Nicollet .....	\$2.00	\$2.50	\$3.50	\$4.00
Washington at Hennepin and Nicollet Avenues		-6.00		-8.00
Oak Grove .....	\$3.00	....	\$4.50	
230 Oak Grove		-3.50		-5.00
Pauly .....	\$1.00	....	\$1.50	....
Nicollet Avenue and High Street	-1.50		-2.00	
Plaza .....	\$2.50	....	\$3.50	
Hennepin Avenue and Kenwood Parkway		-6.00		-6.00
Radisson .....	\$2.00	\$3.00	\$4.00	\$5.00
Seventh Street between Hennepin and Nicollet Avenues	-2.75	-6.50		-30.00
Rogers .....	\$1.25	\$2.00	\$2.50	\$3.50
Nicollet Avenue and Fourth Street	-1.50	-2.50		-5.00
Russell .....	\$1.25	\$1.50	\$2.00	\$2.50
16 South Fourth Street	-1.50	-2.50	-3.00	-4.00
Senator .....	\$2.00	....	\$3.00	
314 South Eighth Street		and up		and up
Sheridan .....	\$1.50	\$2.50	\$2.50	\$3.50
Marquette Avenue and Eleventh Street	-2.00	-3.50	-3.00	-5.00
St. Regis .....	\$1.50	....	\$2.50	
Marquette Avenue and Ninth Street		-3.00		-4.00
Vendome .....	\$1.25	\$1.75	\$2.00	\$3.00
Fourth Street between Hennepin and Nicollet Avenues	-1.50		-2.50	-3.50
West .....	\$1.50	\$2.00	\$2.50	\$3.00
Hennepin Avenue and Fifth Street	-2.00	-4.00	-3.00	-5.00

TRAIN SCHEDULE FOR THE A. M. A.  
MEETING

CHICAGO & NORTHWESTERN RAILROAD

The Chicago & North Western Ry. has been selected as the official route, Chicago to Minneapolis, for the American Medical Association Convention by the Chicago Medical Society and De Luxe Special Train will be operated from Chicago 6:30 P. M., Sunday, June 10, arriving Minneapolis 7:35 A. M., Monday, June 11. Special train will also be operated, Chicago to Minneapolis, for accommodation of the Medical Women's National Association, leaving Chicago 10:00 P. M., Saturday, June 9.

Complete service of the Chicago & North Western Ry., upon which extra equipment will be provided during the A. M. A. convention, includes the following trains:

	The Viking (a)	Arrowhead Limited (b)	North Western Limited (a)	North American (a)
Lv. Chicago	10:30 A.M.	5:40 P.M.	6:30 P.M.	10:00 P.M.
Ar. Min'polis.	9:35 P.M.	7:35 A.M.	7:35 A.M.	10:05 A.M.
	(a)	(b)	(a)	(a)
Lv. Min'polis.	7:55 A.M.	10:45 P.M.	8:00 P.M.	6:40 P.M.
Ar. Chicago	7:30 P.M.	11:30 P.M.	8:35 A.M.	6:50 A.M.
	(a) Via Milwaukee.			
	(b) Via Madison.			

Various other organizations and societies affiliated with the American Medical Association are also arranging for special trains and special car parties via the Chicago & North Western Ry. to Minneapolis direct, also via Rochester, Minn., making short stop-overs at the world's largest clinic. Special sleeping car service is being arranged locally between Rochester and Minneapolis during the A. M. A. convention for the accommodation of members who may desire to stop over at Rochester on either going or return trip.

CHICAGO GREAT WESTERN RAILROAD COMPANY  
*Special Train Service to Minneapolis*

On Sunday night, June 10, there will be a special train service over the Chicago Great Western to Minneapolis for the exclusive use of members of the Illinois Medical Association who will attend the seventy-ninth annual convention of the American Medical Association, to be held at Minneapolis, June 11th to 15th.

If you are planning on attending the convention, a most cordial invitation is extended to you, your family and friends, to join the Illinois Medical Association special train delegation. A very pleasant trip is assured, not only for your travel comfort, but also for the opportunity you will have to meet and visit with friends on the train en route to the convention.

The special train will be a de luxe all-steel, all-Pullman train consisting of the newest type of equipment, including club car, observation-lounge car, and dining car serving dinner on leaving Chicago and breakfast before arrival in Minneapolis.

*Train Schedule*

Leave Chicago 6:30 P. M., Sunday night, June 10.

Arrive Minneapolis 7:50 A. M., Monday morning, June 11th.

The Chicago Great Western Railroad is the only road with direct service between Chicago and Minneapolis with optional routing via Rochester with no additional cost, and is best situated to serve the members of our Association.

In addition to the special train service this road will provide between Chicago and Minneapolis, it operates the fastest and best service between Minneapolis and Rochester. Its running time between these two points is two hours and fifty minutes. During the convention regular and special coach and parlor car service and overnight Pullman service will be operated.

*Location of Parking Space of Special Trains,  
at Minneapolis and Rochester*

Special A. M. A. trains operated over the Chicago Great Western will be parked six blocks from the loop in Minneapolis. Street car, bus and taxi service will be available to members.

In Rochester special cars and special trains of the Chicago Great Western will be parked two blocks from the heart of the downtown district.

*Reduced Fares*

Purchase one-way ticket to Minneapolis, taking a certificate receipt from the ticket agent. Be sure that

your ticket is routed over the Chicago Great Western from Chicago to Minneapolis. The certificate receipt will enable you to secure return ticket at half fare.

Write to E. W. Ireland, General Agent Passenger Department, Chicago Great Western R. R., Room 803, 166 West Jackson Blvd., or phone him, Wabash 2661.

CHICAGO, MILWAUKEE & ST. PAUL RY.

Make the trip to the A. M. A. Convention with congenial associates. Arrange to meet your friends in Chicago on June 10, then take the new *Pioneer Limited* of the Chicago, Milwaukee, St. Paul and Pacific R. R. (The Milwaukee Road), leaving from the New Union Station at 6:30 P. M. Standard Time (7:30 P. M. Daylight Saving Time), that same evening for Minneapolis. An entire section of this magnificent train will be reserved for the Medical Profession. It is a treat to ride in this "crack" limited with its latest type luxurious equipment, the inviting and cozy club and observation cars, its attractive furnishings and attentive service.

The *Pioneer Limited* is equipped with all the latest and modern mechanical devices for the comfort and convenience of patrons, including all new equipment equipped with roller bearings, providing for smoother and easier riding, friction buffers that eliminate jerking and jarring, train moving silently and smoothly whether starting, stopping or racing along at high speed. Notable among its other exclusive features are coil spring mattresses in all berths—the last word for restful sleep, a distinctive feature which is not found on any other railroad. Cozy individual bed rooms with real beds, deep box springs and soft mattresses and a number of other distinctive features.

The \$1.50 table d'hôte dinner served on this train is noted for its excellence by people of distinction and cannot be duplicated in any of the leading Chicago hotels for two or three times the price charged.

If you have ever traveled on the *Pioneer Limited* you will probably want to make reservations for the trip now and if you haven't you can get full information by sending the coupon printed with our advertisement in this issue, also details on the all-expense tours to Yellowstone.

The *Milwaukee Road* also operates other fine fast trains at convenient hours both for day and night service:

The Day Express leaving the new Union Station at 8:15 A. M., arriving Minneapolis 8:55 P. M., the *Columbian*, leaving at 10:30 A. M., arriving Minneapolis 11:05 P. M., the *Pioneer Limited* leaving Chicago at 6:30 P. M., arriving Minneapolis 7:55 A. M., the *Twin Cities Special*, leaving at 9:00 P. M., arriving 9:05 A. M. and the *Olympian*, our Seattle deluxe train leaving at 11:30 P. M. and arriving Minneapolis 11:50 A. M.

For Chicago Daylight Saving Time 1 hour should be added to the above figures.

Returning from Minneapolis there is the same wide choice of frequent and popular train service: The Day Express leaving at 7:35 A. M., into Chicago 7:55 P. M., the *Columbian* leaving at 8:10 A. M., arriving 8:45 P. M., the *Fast Mail* leaving at 6:30 P. M., arriv-



ing 7:00 A. M., the famous *Pioneer Limited* leaving at 8:00 P. M., arriving Chicago 8:35 A. M., the *Olympian*, deluxe Coast train leaving at 8:50 P. M., arriving Chicago 8:59 A. M., also the *Chicago Express* leaving Minneapolis 10:45 P. M., arriving at the New Union Station, Chicago, 11:25 A. M., the following day.

For Chicago Daylight Saving Time 1 hour should be added to the above figures.

This wide choice of frequent deluxe train service offers you the greatest choice of trains leaving at convenient hours and reservations on either of the trains indicated in either direction can be readily made by filling out coupon appearing in our advertising in this issue. Send for the feature booklet on our *Pioneer* and let us mail you the deluxe all-expense tour information pamphlet.

#### THE BUDAPEST MEDICAL CONGRESS, SEPTEMBER, 1928

The Fifth International Medical Congress for Industrial Accidents and Occupational Diseases is to be held in Budapest during September, 1928. The Executive Committee consists of the following: President, Dr. Tibor de Verebely, Professor at the University; Vice-President, Dr. William de Friedrich, Professor at the University; Secretary-General, Privatdozent Dr. George Gortvay, Section Chief.

The National Committee for the United States has been created and consists of the following: Dr. Volney S. Cheney, Chicago; Dr. R. W. Corwin, Pueblo; Dr. Eugene L. Fisk, New York; Dr. Otto P. Geier, Cincinnati; Dr. Leonard Greenburg, New Haven; Dr. George M. Kober, Washington, D. C.; Dr. W. J. McConnell, Philadelphia; Dr. Lloyd Noland, Birmingham; Dr. Francis D. Patterson, Philadelphia; Dr. George M. Price, New York; Dr. Frank L. Rector, Chicago; Dr. Wm. A. Sawyer, Rochester; Dr. Henry F. Smyth, Philadelphia; Dr. C. E. A. Winslow, New Haven; and Dr. Emery R. Hayhurst, Columbus, *chairman*.

Addresses already scheduled by various prominent Europeans include the following: Prof. J. Liniger, Frankfurt a.M.; Dr. F. Zollinger, Aarau; Prof. K. B. Lehmann, Würzburg; Sir Thomas Oliver, London; Prof. J. G. Sleeswijk, Delft; Prof. Jütten, Münster; Prof. Koelsch, München; Prof. Julius van der Hoeve, Leiden; Prof. Dr. Stephan Jellinek, Wien. Also lectures are scheduled to date by the following: Prof. Salvatore Diez, Roma; Dr. C. Poenaru Caplescu and Dr. Presbeanu, Bukarest; Prof. Theodor Sommerfeld, Berlin; Dr. Lorenz Böhler, Wien; Prof. Dr. Quensel, Leipzig; Prof. Dr. C. Marcus, Breslau; Prof. Dr. Molineus, Düsseldorf; and Sanitätsrat Dr. Alfred Peyser, Berdin-Charlottenburg.

Addresses and lectures are wanted from American physicians, dentists, and other specialists in the field. Such are requested to get in touch with the Chairman for the National Committee for the United States, Dr. Emery R. Hayhurst, Hamilton Hall, Ohio State University, Columbus, Ohio. General invitation is

also extended to attend the Congress which will be arranged so as to coordinate with the "Deutscher Naturforscher Tag" to be held in Hamburg, and the "Orthopädenkongress" to be held at Prague during the month of September, 1928.

#### HAVE YOU SUBSCRIBED FOR THE HISTORY OF MEDICAL PRACTICE IN ILLINOIS?

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## PROTEIN THERAPY

Nonspecific Protein Therapy of Carbuncles and  
Syphilis. H. V. Weirauk. Ohio State Medical Jour-  
nal. April 1, 1926, 22:305.

Milk injections constitute the method of choice for  
treating carbuncles and furunculosis. The favorable  
effect, if such is forthcoming, manifests itself promptly,  
and such an effect will be secured in a majority of  
cases. If there is no improvement after two or, at a  
maximum, four days, the case can be handled sur-  
gically. Syphilitic skin lesions show marked improve-  
ment or even complete regression following a course  
of milk injections. The latter, also, appear to be pro-  
ductive of good results in the management of old  
syphilitic patients who have been victims of over-  
treatment to their physical detriment.

Milk Injections in Ophthalmic Diseases. Ira E.  
Gaston. American Journal of Ophthalmology. Feb.,  
1926, Vol. 9, No. 2.

A series of ten cases of infection of the anterior  
segment of the eyeball following perforating injuries;  
six cases of acute and subacute idiopathic iritis and  
iridocyclitis; one case of serpiginous ulcer with hypo-  
pyon; two cases of iritis following operations for  
cataract were treated with non-specific protein therapy.  
All cases showed some benefit following the injections,  
and no serious reactions occurred in any of the pa-  
tients, where pure milk was used. The usual systemic  
reaction was a slight chill, slight nausea, and a rise  
of temperature of from two to four degrees, which  
reached its maximum in six to eight hours and sub-  
sided in from eighteen to twenty-four hours. Bacterial  
examination of the various samples of milk employed  
showed that the degree of systemic reaction corre-  
sponds, in a general way, to the number of bacteria  
present.

Non-Surgical Treatment of Pelvic Inflammatory  
Disease. John A. McGlinn. Therapeutic Gazette.  
April 15, 1926, p. 229.

After a fairly extensive experience of over twenty-  
five years in the treatment of pelvic infections, the  
author's conclusions are: Except for evacuation and  
drainage surgery has no place in the treatment of the  
acute stage of pelvic infection. In the light of our  
present knowledge, operation should not be done in the  
subacute and chronic cases of pelvic infection until  
nature aided by the treatments outlined has had a  
chance to effect a cure. Non-specific protein therapy



is a most valuable addition to the treatment of pelvic infections.

Intracutaneous Aolan Therapy in Ophthalmology. Carl F. Jickeli. Monatsblaetter f. Augenheilk, Jg., 1925.

Suitable for intracutaneous Aolan therapy (it has to be strictly intracutaneous) are the various forms of nonpurulent chronic keratitis; cases of eczematous pannus; lingering, chronic forms of iritis and cyclitis; opacity of the vitreous humor; chronic post-operative and post-traumatic plastic iritis; therefore inflammations of unknown origin and mixed infections. This therapy may also be used as an adjuvant to antiluetic treatment in cases of keratitis parenchymatosa, and luetic diseases of the uvea, retina and of the optic nerve, in order to shorten the course of the disease. The following diseases should be excluded from intradermal Aolan therapy and should be treated intramuscularly, with 10 cc Aolan: Gonoblennorrhoea of adults; serious forms of ulcer serpens cornea; serious, acute, post-operative or post-traumatic infections of the bulbus; in this latter instance, beside careful local treatment, both before and after Aolan injection.

#### NATIONAL WAR ON RATS SHOWING RESULTS

Rats are probably decreasing in numbers in the United States, says the United States Department of agriculture, although their decrease is only beginning to be apparent. The chief factors responsible for the decrease are present-day sanitary requirements and modern building, which make it increasingly difficult for rats to find food and shelter; a national urge against all unnecessary waste; and a better understanding generally of the relation of rats to human economy.

Furthermore, as facts relating to the spread of communicable disease have become better known, more general interest in rat control has been stimulated, more effective means of destroying rats have been developed, and information regarding these methods has been widely distributed. Farmer's Bulletin 1533-F, "Rat Control," prepared by James Silver of the Biological Survey, and just issued by the department, contains many suggestions for the control of rats on the farm and in the city.

Permanent exclusion of rats may be brought about by rat-proofing buildings and other structures commonly inhabited by the rodents; by removing any possible shelter; and by cutting off their food supply. Details on methods of accomplishing these objectives are discussed in the bulletin, as well as such control methods as poisoning, fumigating, trapping, and the use of deterrents.

Although getting rid of rats is largely an individual problem, rat infestation has a serious effect on the whole community, and organized control effort is highly desirable. A person who allows rats to increase on his property until they menace the whole neighborhood becomes an object of public concern, and a city that permits its refuse dump to serve as a breeding place for hordes of these pests is committing a

grave injustice to its population. Ridding a whole community of rats can best be accomplished by organized efforts of all the citizens. The department will gladly assist such organizations through the Biological Survey in planning, organizing, and prosecuting antirat campaigns by furnishing preliminary plans, general instructions, sample copies of posters, and other publicity material, and, where possible, the personal services of a leader.

A copy of the bulletin may be obtained by writing to the United States Department of Agriculture, Washington, D. C.

#### FIGHT TALK

Do you fight your way through three meals a day?

Are you "out" with your in-laws, or does someone else with a hair-trigger temper keep you expectantly poised for battle or flight every minute you are at home?

Everyone's home is his castle, but these days it is stormed more from within than from without its walls.

Many persons feel that if they could just have peace at home they would chance getting along without "World Peace" for a while longer.

They know happy home life is a question of give and take, but there never seems to be anything given or taken but a "piece of someone's mind!"

The five-inch human tongue, wickedly inclined, is the only slippery thing known that increases friction.

Too often temper, disguised as temperament, is inflicted on the home folks.

Surely discord is the key log in the household jam.

But, at that, it takes two to make a quarrel and only one to end it. The best place to end a quarrel is at the beginning!

Remember that peace precedes prosperity, so it pays to scat the domestic discord demons.

Smile sweetly, speak softly, praise generously, criticize not at all, for the folks at home are *your* folks and the salt of the earth. They would stick by you 'til death—and then some. They are entitled to the best; see that they get it.—Chester H. Struble, in October *Nautilus*.

#### BOLSHEVIKI HIGHER MATHEMATICS

Each year has.....	365 days
If you sleep 8 hours a day, it equals.....	122 days
This leaves .....	243 days
If you rest 8 hours a day.....	122 days
This leaves .....	121 days
There are 52 Sundays.....	52 days
This leaves .....	69 days
If you have Saturday half-holiday.....	26 days
This leaves .....	43 days
If you have 1½ hours for lunch.....	28 days
This leaves .....	15 days
Two weeks vacation.....	14 days
This leaves .....	1 day
This being Labor Day, no one works.....	1 day

## Original Articles

### THE DILEMMA OF THE UNIVERSITIES

EMMET KEATING, M. D.

CHICAGO

The attempt to open a charity lying-in hospital in South Chicago, which was blocked by the energetic, aggressive and intelligent action of the physicians of the South Chicago Branch; and the acceptance of a sum of money from the Public Health Institute by the University of Chicago, precipitated a discussion in the Council of the Chicago Medical Society which resulted in the adoption of a resolution that the University of Chicago be barred from participation in the program of the meeting of the Illinois State Medical Society, to be held in Chicago, May 15, 16 and 17, 1928.

The medical profession now finds itself confronted with a solution of some large problems that have ceased to be local, and will eventually have to be considered and studied by the American Medical Association. The genesis of these problems might seem to be multiple in character, but the starting point can be traced to those leaders in the medical profession of the not very remote past, who saw in the utilization of medical charity, magnificent opportunities for making money and acquiring fame in the practice of medicine. Their activities have been productive of medical progress, but the means were, and are, as deplorable as would be the use of Public Health Institute money for the furthering of medical research. For years the great mass of the medical profession was helpless, but with the raising of standards of education, there has come upon the scene a body of physicians whose efforts are not hampered by either lack of culture or professional ability.

The entire profession is in accord with the policy of providing charitable patients for teaching purposes. The heretofore helpless majority has always been bitterly opposed to the extension of this service to those able to pay. They have not been blind to the fact that the physicians working in charitable institutions have dishonestly profited from the pay of those who were supposedly receiving free services.

The dispensaries learned long ago that both young and older physicians were willing to work in their clinics in order to gain experience rap-

idly, while hoping that, by faithful service, they might gain admittance to the charmed inner circle that was reaping the financial reward. The clinic authorities also discovered that the nominal fees obtained from large numbers of patients, bore a resemblance in profits to those of the five and ten-cent stores.

The politicians were quick to see the immense value to them of well organized charities. The appeal to sympathy; the opportunities to secure free medical and hospital service for their friends and supporters; the toll from contracts for supplies; the tremendous graft connected with buying land, erecting and equipping buildings; the voting strength of the patronage dispensed for the maintenance and conducting of many projects, proclaimed as being for the benefit of charity, but in reality for the benefit of the politicians. In more or less close relations with the politicians are the social workers, the self-appointed guardians of the commonwealth; to them, charity is the breath of life. It is hoped that mounting taxes in cities like Chicago may cause honest men in politics to muster sufficient courage to call a halt.

Nothing in conflict with established economic laws can continue indefinitely. The present awakening is not entirely due to a new-born courage of the rank and file of the medical profession. Those physicians who are in strategic positions to profit from the present conditions are becoming aware of breakers ahead. Lay trustees of universities are taking notice of the poor business policy of giving away indiscriminately, so valuable a commodity as medical service. But poor business policy is not the sole cause of their interest in the welfare of the doctor. The medical schools, which for so long a time were looked upon as the stepchildren of the universities, are coming to be recognized as mothers' boys. The only ones of their children that are in a position to help support the family. Full time salaried teachers, with clinics filled with patients ranging from those able to pay moderate fees, to the millionaire class, will bring to the universities handsome returns. One thing in favor of this plan is that it is much more fair competition, than the present plan of supposed charity. There is nothing to prevent that part of the medical profession, not on the staffs of medical schools, from giving an equal or better service than that offered by the universities.



Another thing in its favor is that no one is being asked to work for nothing, and depend upon a ready wit to profit from the connection. Many arguments could be submitted in favor of the full time, salaried practitioner supported from the income of pay patients; but they must all fall when confronted with the obligation of mankind to care for the weak and helpless among us, and the opposition of the medical profession to fixed salaries for doctors. This opposition would not hold if the physicians working full time and on salaries, were treating no one but charity patients. The universities would have no difficulty in finding competent physicians who would be willing to devote their entire lives to teaching and care of charity patients, if they could be assured of a salary sufficient for men of their ability and social standing. So long as the universities received no profit from their ministrations to the sick poor, they would be happy in their positions, and would contribute great things to the science of medicine. The campaign waged by the American College of Surgeons against fee splitting, was not waged because they really thought that doctors would take their cases to the highest bidders. The rule against fee splitting was put in force because some of the doctors had not paid to the surgeons half the amount of the fees, which the patients had paid to them.

The number of patients required for teaching purposes for undergraduates is comparatively small. Chicago has an abundance of poor, not only for its own teaching needs, but could supply paupers enough to meet the needs of state universities in adjoining states, that have no large centers of population and little abject poverty. This plan would be of benefit to the adjoining states by removing the incentive to lower the social standards of their people; helpful to Chicago, in that it would remove for part time, a portion of the population that is a liability; helpful to the paupers, in that they would have a change of scene, and the benefit of slightly different climates.

One of the chief arguments of the university trustees, for making the medical department income producing, is lack of funds to carry on the work. They claim that it is extremely difficult to obtain endowments for this purpose. If this claim is valid, the lack of interest on the part of the public may well be attributed to the

policy in force for so many years of lay organizations advertising the fact that the best medical service was available to all classes without pay, because the medical profession was willing to work for nothing. If the universities can assure the medical profession that only the poor will receive free treatment, the medical profession will willingly use its influence to secure endowments that will amply care for the universities' needs. When the full time university professors, and all physicians connected with the medical faculties, know that the treating of those able to pay will add nothing to their income, nor to the income of the universities, there will be no abuse of medical charities.

In dealing with this subject, we must not lose sight of the fact that while the outside physician, with the aid of his friends the specialists, can render to patients a service equal to, or better than the service that can be obtained at the hospital of the university; both he and the specialists must depend upon the universities to refute some of the old, and produce the new. Research work cannot be carried on to any appreciable extent by the practicing physician, or by any group of physicians who are practicing medicine as a unit. The university is the outstanding figure in this work, because it requires the contributions and assistance from practically every department of the university. The knowledge of the mathematicians is necessary, for instance, in the study of metabolism; the foreign language departments, in making available the contributions of men of other nations; the anthropologists, by reason of their observations of the work and remains of vanished races; the physicists and the photographers; in fact, medicine must utilize nearly every activity that finds a place in a university program. The science of chemistry no longer monopolizes the field as being the only adjunct to the proper study and development of the science of medicine.

The many problems involved in deciding the proper course for the universities to follow, must find their solution in the joint efforts of the faculty and trustees of the university on the one hand, and the practicing physicians on the other. The questions must be approached with open minds and clear thinking. Self-interest and animus must play no part in these joint studies, if a proper solution is to be reached.

2758 Fullerton Avenue.

## JAMES MINER OF WINCHESTER\*

CARL E. BLACK, M. D.

JACKSONVILLE, ILLINOIS.

What are the great outstanding objectives and accomplishments of the medical practitioner? What leads men to enter the profession? The main thing that attracts men into medicine is the opportunity of becoming an intimate part of a community; the privilege of knowing men, women and children as individuals, as families and as units of social life. In ambitious pioneer communities this was a high position. The general practitioner of the recent past had this privilege to a higher degree than any other man. He could more nearly estimate the moral and social values of the human units. To do this he must be highly human. Some think the doctor is losing this position since the vogue of specialties and hospitals.

As we read the history and literature of medicine we find much of honor and credit to the writers and research workers. As we go about the world we find numerous monumental evidences of the life and work of the great ones whom we love to honor for their gifts to humanity. The world has been made happier and better and the span of life lengthened by their labors. These are the outstanding few—the great leaders—the generals and admirals who hoist the banners of progress and lead the way.

What shall we say of the great and noble army of workers who test out in the field of practice the new ideas. Until these workers have passed on the value of discoveries and new methods, these discoveries and new methods are only offerings.

Their real value is decided by the host of practical men who apply them at the bed-side. Before the day of great hospitals and clinics this service was wholly in the hands of the individual practitioner. There is a scrap heap piled mountain high with promising discoveries and inventions which this army of bed-side physicians has discarded. They are the good doctors to whom the public looks for the decision. Many times these bed-side workers offer suggestions which make the new thing workable or else they find a wider field of application for the new method. Until a composite verdict has been given by the

every day practitioner the real value of the new discovery is unknown. The public at large and the research workers and teachers too often overlook the men at the bed-side.

As we look back over the history of medicine we find numerous examples of great discoveries and new methods first brought out by men in small communities. The Mississippi Valley gives a number of such examples, as McDowell, Brashear, Bradford and others. Robert Koch was a country doctor when he did his most notable work.

A new method is heralded broadcast as finished, forgetting that its value has not been confirmed by the jury of practitioners who are always looking for new and better ways for their patients. Their decisions do not have the popular glamour of original announcement but they have the weight of finality. A plan which works in the laboratory has often been found deceiving in actual practice.

Too often the family physician and the country Doctor are written about as through their only claim to distinction was the poetical setting in which they lived; the log cabin, the one horse shay, the one room school, the lonely ride or the midnight vigil. Such is far from the fact. Many of the finest characters in the field of medicine are to be found among those in small communities who have devoted their lives, physically, spiritually and mentally to the sick who sought their aid. No other life, no other form of service is so ennobling and so far-reaching in building character. This is character built on efficient and intelligent understanding of men. Men of this type live for their communities as well as in them, and after such a life of devotion they reap a reward of community appreciation which is one of the highest goals to which man can attain.

It is for the life and experiences of such a brother-practitioner that I ask you to join me in voicing appreciation. He was one who did the work of each day well, kept abreast the progress of the times, served the sick cheerfully and long, and in a ripe old age enjoyed the confidence of his neighbors and friends, as only such a doctor can. It is a type that has no superior—or one might say—no equal in any other line of human endeavor.

James Miner was born in Winchester, Scott County, Illinois, January 16, 1835. After at-

\*Read before the Morgan County Historical Society, January 20, 1928.



tending the schools of his neighborhood he went to Shurtleff College and graduated in 1854. He taught school in Griggsville for a year and then went into the office of Dr. Clark Roberts where he read medicine preparatory to going to medical school. He entered the medical department of the University of Missouri in 1855, but he spent the next summer with Dr. Roberts. Many Doctors of the pioneer days would tell you that the information and training they received while "riding with" a good preceptor was the best part of their Medical Education.

According to the interesting sketch by Dr. Miner, Dr. Roberts was a many sided character of great originality and of a quality which was an inspiration to any embryo doctor.

After finishing the course at St. Louis Dr. Miner "set up" for practice at Waverly, Illinois, in partnership with Drs. Brown and Metcalf, where he remained about four years. He was not satisfied with his medical preparation and went to Philadelphia and entered Jefferson Medical College, graduating in 1861. He returned to his practice in Waverly in 1861 but soon joined the 101st. Volunteer Infantry as surgeon. He was disabled by sickness, and as soon as he could he again took up his practice in Waverly where he continued until 1868 when he went back to Winchester, where he continued in practice until the infirmities of age compelled him to retire. He died September 17, 1925, when well past his nintieth birthday. He was one of the second generation of pioneer doctors, in touch with the old while grasping the new.

A look at the strong intelligent face of Dr. Miner is all that is needed to convince one of his strength of character and his force in the community. He was a man of keen interest and far-reaching insight into all the forces and happenings of the day. He was of medium stature, stocky build, sandy complexion with a dignified, deliberate bearing. He was genial and frank but with a vein of humor which sometimes suggested cynicism although never disagreeable. When occasion demanded he could be most positive.

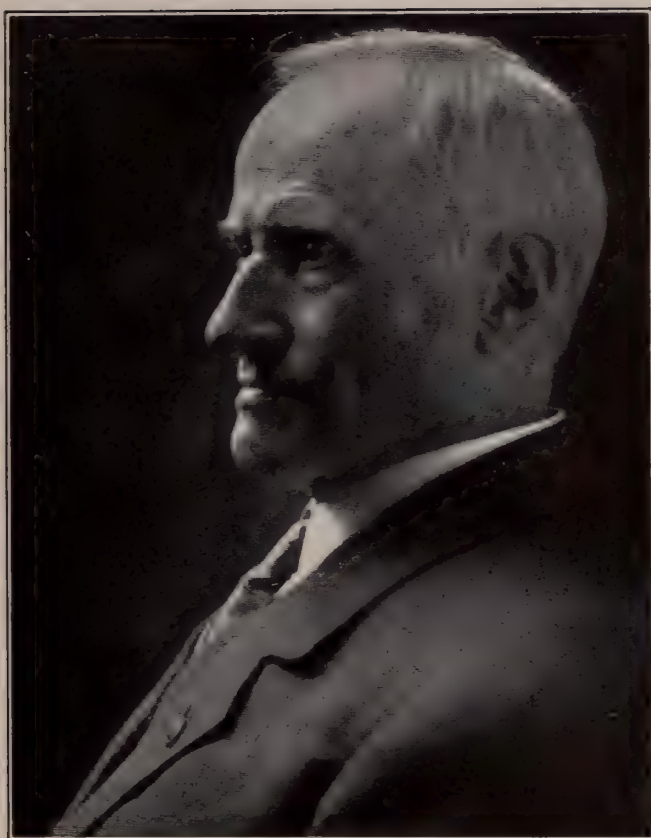
His father was a man of means and one of the earliest pioneers in Western Illinois. He was a banker, a trustee of Shurtleff College, and a man of affairs who was able and did give his son the best advantages of the day. Notwith-

standing these advantages, Dr. Miner, like the country doctors of Ian Maclaren and Balzac, deliberately elected to devote his life and energy to a small community. Here he found his opportunity and his reward. He had a hereditary back ground which carried directly back through his mother, Saphronia Alden, to John Alden of Mayflower fame, while the Miner geneology has been traced back to the Norman Conquest. He married a wife, Eleanor Hawthorne Thomas, in 1861, who had a lineage hardly less distinguished than that of her husband. His ancestors served in the Revolutionary War.

Thus circumstances fitted him for a place of power and service to any community. All of these advantages were amply tested during his long career in medicine. He wanted to serve and serve he did long and well. He was a broad reader not only of the literature of medicine but nothing of importance escaped him in general literature as well as the current topics of the day.

He had an especial interest in history and his home was a veritable storehouse of historic letters, pictures and books. He has carefully preserved innumerable things of historic value. He had a keen appreciation of everything bearing on the history of his country and his times. He knew their worth. He had carefully preserved his diplomas, commissions and even his matriculation tickets in both St. Louis, and Philadelphia. These are interesting historically and for the great names in medicine which they bear. For these reasons we reproduce them.

He took an active part in the politics of the day and was always thoroughly informed about the affairs of government whether it was local, state or national. He was commissioned by Governor Richard Yates, the War Governor, and as a soldier and surgeon during the Civil War he had friendly personal relations with many of the leading figures, among them General U. S. Grant, in an acquaintance which continued after the war. He knew Lincoln who was entertained in his father's home and he met him frequently. He knew Douglas who began his career as a school teacher in Winchester. He was always interested in men—the leaders—whether in politics or in medicine and this interest continued throughout his long life. He frequently furnished information to historians and others



James Miner, M.D.  
1835-1925

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Matriculation.

Mr. James Miner  
Of the State of Illinois

is regularly Matriculated

IN THE Jefferson Medical College. FOR THE

ENSUING SESSION.

Philad. Decr 19. 1860.

Robert Druggan, Dean

Jefferson Medical College,  
OF  
PHILADELPHIA.

SESSION 186

Admit Mr. James Miner of Ill.

TO THE LECTURES ON

Materia Medica and General Therapeutics,

By Thos D. Mitchell, M. D., Prof. &c.

Jefferson Medical College,

March 4 1861

Thos D Mitchell

Dear Sir,

I have the pleasure to inform you  
that the Faculty have this day decided to  
recommend to the Trustees, that the Degree  
of Doctor of Medicine shall be conferred upon  
you at the next Commencement.

I am, Dear Sir,

Truly yours,

Robert Druggan

Dean.

Mr James Miner.

interested in Lincoln, Grant, Douglas and others, as well as regarding pioneer conditions in Illinois. Among his letters are to be found interesting correspondence with Lord Charnwood and Senator Albert J. Beveridge to whom he furnished reminiscences of Abraham Lincoln.

He knew the men of his community and took an active part in all that interested or perplexed them. His views and opinions were positive and

important committees of the Illinois State Medical Society and was several times a delegate from that society to the American Medical Association. Among his papers are to be found some interesting and important writings. He wrote brief sketches of all the pioneer doctors of Scott County thereby preserving to posterity the names and doings of those who blazed the trail.

He prepared an interesting account of his

## MEDICAL DEPARTMENT

OF THE  
UNIVERSITY OF MISSOURI

*Demonstrator's Ticket*

SESSION OF 185

*For Mr. James Miner*

## MEDICAL DEPARTMENT

OF THE

UNIVERSITY OF THE STATE OF MISSOURI

LECTURES ON

SURGERY AND SURGICAL ANATOMY.

*Anatomical* BY *Anatomy*  
JOSEPH H. McDOWELL

SESSION OF 185, c

*For James Miner*

## MEDICAL DEPARTMENT

OF THE

UNIVERSITY OF THE STATE OF MISSOURI

LECTURES

ON ANATOMY,

BY JOHN T. HODGEN, M. D.

Session of 185, c

*For Mr. James Miner*

*J. H. McDowell, M.D.*

*John McDowell*

*John T. Hodgen, M.D.*  
*J. H. McDowell*

he could express them in a terse and practical way. In every day life his habits were the habits of the community; his virtues the virtues of the community; his vices the vices of the community. He never sought to set himself up as "a better

three meetings with General Grant during the Civil War.

Dr. Miner was taken prisoner near Lumkin Mills. In writing about this experience he says "I told them it wasn't the practice to take sur-

## PHILADELPHIA HOSPITAL

### Matriculating Ticket

185

Jefferson Medical College.

*For Mr. James Miner* is hereby

permitted to attend the Lectures of this Hospital.

FOR THE ENSUING WINTER.

Philadelphia, 185

at the request of the Board of Trustees

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## JEFFERSON MEDICAL COLLEGE

Philadelphia

LECTURES ON

CHEMISTRY

*By Franklin Bards*

*For Mr. James Miner*

Dec. 26<sup>th</sup> 1859.

## Jefferson Medical College

PHILADELPHIA

Lectures

SURGERY.

*Samuel J. Gross*

*For Mr. James Miner* 1859-60

than thou" model but was always content to perform each daily service well.

He was an interesting and cultured companion. His wide information made him especially popular with the young doctors with whom he delighted to associate. He was a regular attendant at county, state and national medical society meetings and would usually be found in company with the younger men of the profession. While he seldom prepared papers for medical meetings he frequently served on im-

geons prisoners. They said they had orders to bring every one to a certain place. I told them to take me to some of their Generals or Colonels. Lane, (he was just recovering from a three weeks' illness) and supported by two men, while going along the street I met Captain Phil. Price, a son of "Old Pap" Price a former Governor of Missouri. I had attended lectures with Cap. Price at McDowell's College, St. Louis, in 1855-56 and he was now in the confederacy. Hailing him, he at once recognized me and I asked him



if he took surgeons prisoner. He said "Well, I'll make an exception in your case, where do you wish to go."

For several years before his death he was the oldest living member of the Illinois State Medical Society.

What a privilege he had enjoyed—not simply that he had lived out the most wonderful period of development in medicine. He really lived in the development for he was a constant reader of medical literature—a most intelligent reader, who enjoyed the progress which medicine was making, and who appreciated it.

Medical friends always found him informed as to what was going on in the medical world; always inquiring as to the value of these advances and ready and anxious to apply them for the benefit of his patients. When he entered practice of medicine, anesthesia was only on the threshold of its beneficent career. The new surgery and the new medicine, founded on an understanding and application of the germ theory of infection and of disease had not been born.

Pasteur and Lister were yet to come.

What a rare privilege such physicians enjoyed who had the advantage of the best education of the day and had the natural capacity and the desire to keep abreast of the best medical thought of the times. Such a one was Dr. James Miner. Where could he have found in all the growing West a better location than on the edge of the Illinois River bottoms. This was a location where malaria was at its best ready to confound the unwary doctor at every turn, and where fevers of all sorts were mixed up in such profusion. Typhoid fever was not yet an entity but was confounded with bilious and typhus fevers, diarrheas, dysenteries, and the various bowel complaints of the times. Fevers were the order of the day and in such communities few individuals escaped for a season. The reports and the correspondence of that time are full of such expressions as "Every family was attacked last year." Continued fever, autumnal fever, ischmian fever, remittent fever, intermittent fever, bilious fever, inflammatory bilious fever, malignant fever, and many others were constantly demanding the doctor's attention. Epidemics were a frequent disruption of the pioneer communities. Diphtheria, diphtheritic sore throat, putrid sore throat and cynanche were hopelessly mixed. Erysipelas, black tongue,

ophthalmia, puerperal fever, scarlet fever, scarlatina and smallpox were poorly differentiated, and were frequently epidemic and very fatal. Pleurisy and pneumonia were sufficiently frequent and fatal but were constantly added to other names, as typhoid-pneumonia. When the people were free from these prevalent fevers for short periods, the doctors were busy with rheumatism, ague, (agy, shakes) and the ill effects of night air and miasmatic diseases, milk sickness, "Indian Trembles" and nursing sore mouth added to the perplexities. Much was said and written about zymotic diseases.

One may ask why such an array of misunderstood or poorly understood diseases was an opportunity. First it was an opportunity for real service to many a distressed neighbor and friend. But to a man of Dr. Miner's temperament and understanding it was the joy of seeing the chaos of undifferentiated diseases slowly but surely separated. He was a student and a reader as well as a practitioner of his profession. He began to practice medicine when it was the pride of the doctor to battle with disease single handed. Specialists in medicine were as yet unknown. Practically all doctors were general practitioners and surgeons and specialists as well, and what the family doctor could not do, could not be done. Each doctor sought to do his utmost for his community of patients, and the leader among those in this community was Dr. Miner.

He was familiar with the theory of the unity of fevers as enunciated by Benj. Rush, Daniel Drake, N. S. Davis and many other leaders. He knew that this theory was unsatisfactory and gradually one here and there voiced his dissent. He saw a little ray of light shining through here and there by which some of this medley of fevers began to be slowly and laboriously differentiated. Typhoid fever began to be a more definite entity as did pneumonia and pleurisy. Malaria began to be more definitely separated from the other fevers. Even before Pasteur's epoch making, and to the studious doctors, thrilling discoveries in bacteriology, the suspicion of contagion was attaching to a number of diseases such as puerperal fever, erysipelas and diphtheria. Miasmatic influences and night air were beginning to lose ground as basic causes of disease.

I have talked with Dr. Miner many times and know that he was a close and enthusiastic

follower of all of the changes in the understanding of disease.

It was easy for him to let go of such undefined maladies as bilious, continued, intermittent and remittent fevers. He easily and readily accepted bacteriology and the proof of its causative relation to disease, as this knowledge was brought to him through his medical literature, the medical society and his personal contact with leading physicians. As he approached middle life events moved rapidly but he was not one to hold back, for he was always ready to accept the advances and to try them. "*Try them,*" that was his great contribution to medicine. He was of that thinking, reading, understanding class who could intelligently try out the new ideas of the research workers and pass judgment on their practical value to the sick. He readily gave up the prevailing idea of typhlitis, perityphlitis and inflammation of the bowels and substituted for them appendicitis, cholecystitis and ulcer of the stomach. He accepted the clinical laboratory, the x-ray, the trained nurse and the modern hospital as a necessary part of the progressive practice of medicine. He quickly caught the new rays of light on hitherto obscure phases of disease.

He easily parted with the old and accepted the new. He was temperamentally and mentally able to accept advances and to enjoy them.

The progressive physician of this period underwent such a transformation in medicine as will probably never be seen again in the same length of time. Progress in medicine was so rapid as to be astounding and Dr. Miner enjoyed the thrill to the full. Medicine was recast and reclassified in his day.

He was one of the founders of the Morgan County Medical Society and later was active in organizing a Medical Society in his own county—Scott County. As long as he was physically able his county society flourished because he could meet his fellow practitioners in discussion and listen to their views and profit by their experiences.

He was one of those who aged only in body, but not in mind. He loved his profession both as a practitioner and as a student. He fulfilled one of the most useful functions—that of testing in the field of every day practice the advances in his profession. He served his

community and his profession intelligently, progressively and faithfully.

He departed from his earthly labors surrounded by a family of children and grandchildren and a community of loving and appreciative friends. I am sure we can agree with the sentiments Dr. Miner wrote to his son in the last years of his life when he said, "The Lord has been mighty good to me, far beyond my desserts, and beyond some dark passages in my life, this world has been a mighty fine world for me to live in. I have enjoyed my life and the friends I have found in it. I have lived in the love of my family. I have been proud of my children. So far as I am concerned, I would not want to live in a better world."

NOTE: The author wishes to express his obligation for many of the facts in this brief biography, to Anne Parker Miner, who has written an interesting sketch of Dr. Miner as a citizen and to Miss Bertha Miner, the daughter who had charge of his household after the death of his wife and who gave him loving and tender care in his old age.

#### ANGINA PECTORIS\*

HARRY A. DURKIN, M. D.,  
PEORIA, ILL.

In presenting the subject of angina pectoris for your consideration this afternoon, I wish at the outset to disclaim any attempt at originality and to state that this paper is, for the most part, a review of the present day conception of this disease.

Angina pectoris has always interested members of the medical profession, both because of the dramatic character of its manifestations, and because so many distinguished physicians have been numbered among its victims. Within recent years it has assumed an added importance because of the increasing frequency with which it is encountered. Twenty years ago an average of one case a year found its way into the large metropolitan hospital, and an active consultant saw about a dozen cases; to-day about twenty-five a year are encountered in a large hospital and an active cardiologist† may see as many as 100.

*Etiology:* The final word as to the exact

\*Read before the Section on Medicine, Illinois State Medical Society, Moline, May 31, 1927.



mechanism of angina pectoris has not yet been said. Anatomical studies have thus far failed to disclose any structural changes which are uniformly present in all cases. While it is true that this syndrome is associated with coronary or aortic sclerosis in a majority of instances, it is equally true that there is a **not** inconsiderable number of cases in which no structural changes are demonstrable post mortem. Furthermore, extensive sclerosis of the aorta and also of the coronary arteries may exist where there has been no history of angina. The transient character of the anginal attack makes it rather improbable that any permanent structural change could be solely responsible and points to some temporary alteration in function as the more logical explanation.

There have been three different theories as to the pathogenesis of anginal pain. The first of these is the theory of Mackenzie, who believed that angina is an expression of myocardial failure, as a result of coronary narrowing and degenerative changes in the heart muscle. Albutt contends that the pain is due to degenerative changes in the aorta, and occurs whenever the nerve endings are stimulated by a rise of intra-aortic pressure. The third theory invokes a temporary disturbance of the coronary circulation as the cause of angina pectoris. This last theory is open to less serious objection than the others. In its favor is the fact that the pain of coronary occlusion which is due to actual coronary disease, is similar to though more severe than the pain of angina.

**Age and Sex:** Although the average age of onset is in the late fifties, the disease is not uncommon in the forties. In Kahn's series of eighty-two cases,<sup>1</sup> 25% experienced the first typical attack before the age of forty. Angina has always been more frequent in males, but the proportion of female sufferers has steadily increased during recent years—due perhaps to the increasing stress imposed by the entrance of women into the world of commerce.

**Occupation:** The nervous wear and tear which is the inevitable accompaniment of modern business and professional life, is a potent factor in the production of angina pectoris. We are living in a high speed age, where competition is keen, and where he who would survive the race must strain his machinery to the utmost. Hence

it is that angina is much more common in the tense business executive, and in the over worked doctor than in the more leisurely laborer and farmer.

**Infections:** While it is possible that infections, including rheumatic fever, frequent tonsillitis, dental infections, and gall-bladder disease may play a part in the production of arterial disease, there is no evidence that they are primary causes of angina. Syphilis is of minor importance. In Kahn's<sup>1</sup> series, a positive Wassermann was found only three times.

**Poisons:** Tobacco is probably not important as a primary cause of angina. There is no conclusive evidence that it produces arterial changes, and angina is fully as common in individuals who are not addicted to its use. In sensitive individuals it may increase the intensity and the frequency of an existing angina. Alcohol, tea, and coffee occupy a similar position.

**Symptomatology:** Inasmuch as the diagnosis of angina rests almost entirely upon the history elicited from the patient, the value of an intimate acquaintance with the characteristics of anginal pain cannot be overemphasized. Anginal pain was first described by Heberden in 1768, and subsequent observers have not improved upon his masterly description.

The pain is variously described as vise-like, squeezing, crushing, or tearing. These terms convey the idea of an oppression, or more properly of a compression within the chest. Such terms as sticking, stabbing, knife-like, or shooting are rarely used by the sufferer from true angina, and are more likely to be employed by nervous patients who have little or nothing wrong with their hearts. It is true that there are milder types of true anginal pain, which are described as a feeling of tightness, or fullness, or of pressure. It is noteworthy, however, that all these terms are indicative of compression.

The location of the pain is nearly always substernal, usually midsternal, but sometimes at higher or lower levels. From this primary location it may radiate to the left shoulder, down the left arm to the fingers, and more rarely into the neck and down both arms. Only rarely is it precordial alone, and very exceptionally it may be felt only in the wrist or shoulder. Both the presence and extent of radiation are in the majority of instances, directly proportionate to the intensity of the pain.

A further feature of anginal pain is its paroxysmal character. It comes on in attacks, which are sudden in onset and comparatively sudden in disappearance. The duration of the attack varies from a few seconds to half an hour, rarely longer. Any severe attack which lasts longer than thirty minutes and fails to respond to rest or the nitrites, is almost certain to be due to coronary occlusion.

The circumstances which initiate an attack are extremely important in evaluating the significance of severe precordial pain. The vast majority of patients with true angina pectoris will state, without solicitation, that the attacks are precipitated by exertion, emotional stress, heavy meals, or cold weather. The ease with which these four factors bring on an attack is extremely variable. In some cases an attack may occur after such a trifling incident as a disturbing thought or climbing into a cold bed. Whether the attack be mild or severe, it is relieved by rest, both physical and mental. The victim of angina must stop in his tracks and rest until the attack passes on.

The mental states associated with angina pectoris are not uniform. The classical fear of impending death or "angor animi" is by no means always present and, in the writer's personal experience, it is more frequently absent. Psychic reactions depend to a considerable extent upon the nervous makeup of the individual patient, being more frequent in the hypersensitive and infrequent or absent in the phlegmatic individuals who have a higher sensory threshold.

Dyspnea does not belong to angina pectoris. Because of the feeling of constriction, the patient may catch or hold his breath and enjoy a deep inspiration when the attack is over, but there is never the deep hurried or forced breathing which is recognized as true dyspnea. However, dyspnea may appear as a result of progressive myocardial failure in patients who have had angina. With the advent of dyspnea, painful attacks cease, due no doubt to the low ebb of cardiac reserve.

*Physical Findings:* Angina pectoris per se, presents no characteristic physical findings. During the actual attack there is little if any disturbance in the pulse rate and the blood pressure remains stationary or is slightly elevated. In about 25% of the cases, the most painstaking inventory, including x-ray and electrocardio-

graphic examinations, fails to disclose any cardiac abnormality. In the majority of cases, however, evidence of various types of cardiac pathology may be demonstrated. These findings are the result of the varied morbid processes which may attack any heart and are in no way dependent upon angina. They possess no great diagnostic significance and their sole importance lies in their influence upon the prognosis and future clinical course. They are, in short, the evidence of the type of heart in which the syndrome known as angina is occurring.

Foremost among these findings are those which are the result of coronary and aortic sclerosis; i. e., the findings associated with arteriosclerotic heart disease. These include cardiac enlargement of varying degree, mitral and aortic systolic murmurs, poor heart sounds, dilation or tortuosity of the aorta, and electrocardiographic evidence of myocardial degeneration.

Angina pectoris may occur also in hypertensive, rheumatic, or syphilitic heart disease, each of which presents its characteristic and well known physical findings.

Abnormalities in rhythm are the exception, a normal rhythm being the rule. Premature contractions, usually ventricular, are not uncommon, but paroxysmal tachycardia and heart block are rare. Auricular fibrillation is exceptionally rare in individuals suffering from angina pectoris.

Electrocardiographic examinations are eminently desirable in every case. Notwithstanding the fact that normal tracings are very often found, the electrocardiogram will not infrequently furnish the only evidence of underlying myocardial pathology. Willius in an analysis of 155 cases of angina, found a normal electrocardiogram in only 19%.

*Differential Diagnosis:* Anginal pain must be differentiated from the pain of coronary thrombosis, the pain of aortitis, the various types of fatigue pain, including that of hypertensive heart disease, chronic valvular disease, paroxysmal tachycardia, and also from nervous heart pain.

The pain of coronary thrombosis is usually more severe, fails to respond to rest or nitrites, and responds only after a number of hours to repeated doses of morphin. Objectively, the ashen facies, the dyspnea, poor heart sounds, various arrhythmias, a falling blood pressure, pulmonary congestion, fever, leukocytosis, and occa-



sionally a pericardial rub constitute a picture which should render differentiation comparatively easy. There are border line cases, however, in which a differential diagnosis is extremely difficult. In these cases the pain lasts an hour or more, responds partially to nitrites, and is not attended by the dramatic findings noted above. A careful watch for arrhythmias and repeated observations of the temperature, the white count, and the blood pressure, will often lead to the conclusion that a small coronary branch has been occluded. The occasional occurrence of healed infarcts, post mortem, would lead one to believe that these border line cases are not infrequent.

The pain of aortitis is not so sudden in onset and is described as a dull and prolonged ache. It is usually situated above the third rib and tends to radiate through to the back rather than down the left arm.

Fatigue pain may simulate anginal pain in severity, but it lacks the compressive qualities, is of longer duration, and fails to respond to nitrites. It is seen particularly in long standing hypertensive heart disease and also in chronic mitral stenosis. It is an expression of muscle fatigue and it responds to digitalization. The same type of pain may occur after a prolonged attack of paroxysmal tachycardia. An analysis of the type of pain and a consideration of the physical findings should enable one to appraise this group correctly.

Effort syndrome or nervous heart may offer considerable difficulty. The pain in these cases may be intense and accompanied by fear of death and by marked psychic disturbance. These patients are usually young and present definite evidence of a neurotic constitution. They are introspective, tremulous, dyspneic, and show a tendency to faint easily. The pain is described as sticking or knife-like and lacks the compressive qualities which are characteristic of true angina. They are frequently labelled pseudo angina, a term which should be abolished.

*Prognosis:* While the diagnosis of angina pectoris is in most instances a comparatively simple matter, the prognosis constitutes a much more difficult problem. Most writers on the subject have indulged only in shadowy generalizations and the majority of the profession dismisses the question with a figurative shrug of

the shoulders. It is no exaggeration, I believe, to say that the prognosis is the most important aspect of the disease. The family may reasonably expect something more than the meagre information that the patient may die at any time, and the physician himself will be able to handle the situation much more effectively if he knows how to assay the severity of the individual case. In view of these considerations it would seem worth while to inquire rather carefully into this phase of the subject.

The clinical course of angina presents a number of variations. Exceptionally, an individual may succumb in the first attack. More commonly, particularly in untreated cases, there is a repetition of attacks over a period of years. In this group the seizures become progressively more frequent, recur on slighter provocation, and the patient dies as a result of coronary thrombosis. In another group of cases, the painful attacks cease, signs of decompensation appear, and the patient dies of progressive congestive failure. In rare instances complete recovery may take place.

Thus far, only two writers have published prognostic data based upon a large series of cases. Mackenzie<sup>2</sup> in 1923 published his observations on 323 cases, and Paul D. White<sup>3</sup> in 1926 reviewed the prognostic features of 200 cases. In Mackenzie's series, 120 died within five years of the onset of symptoms; fifty-eight died within ten years; and thirty-five survived a ten year period. In White's series, sixty-six died within five years, and 136 were still alive at the time of his report. Both of these observers, while admitting the pitfalls which attend an attempt to predict the outcome of angina, have sought to determine the relationship of various factors to the probable duration of life.

Quite naturally the state of the heart itself is the most important consideration in the analysis of a given case; the poorer the heart, the worse the prognosis, and vice versa. Roughly speaking, cases showing cardiac enlargement exhibit a mortality four times greater than that which occurs when the heart is normal in size. Other serious prognostic signs are poor heart sounds, congestive failure, pulsus alternans, gallop rhythm, nocturnal or paroxysmal dyspnea, all of which are indicative of grave myocardial

damage. Hypertension plays a definite but perhaps minor role in hastening death.

The electrocardiograph is of invaluable assistance in arriving at an estimate of the condition of the myocardium. In White's series 31% of the patients showing abnormal electrocardiograms died within the five year period, as contrasted with 5% of deaths in cases which showed a normal electrocardiogram.

The description of the various types of electrocardiographic abnormality and their individual significance is not within the scope of this paper.

The extra-cardiac factors which are helpful in arriving at a prognosis are gathered from the history and from a careful estimate of the make-up of the individual patient. Foremost among these is the ease with which the attack is produced. Attacks which are precipitated by slight exertion or excitement are obviously more ominous than those which occur only after prolonged effort. Patients with angina decubitis usually die within a year. The personality of the patient should always be taken into consideration when estimating the prognosis of a given case. Highly strung, hypersensitive individuals, because of their ready response to measures directed toward a reduction of nervous irritability, have a better outlook than their more phlegmatic fellows. The final factor in determining a prognosis is the extent to which the patient is able or willing to cooperate in treatment.

*Treatment:* Few conditions in medicine demand more tact on the part of the physician than does the management of angina pectoris. The patient must not be frightened and, at the same time, the situation must be explained to him with sufficient clarity to enlist his implicit cooperation. Treatment can do much and all observers have emphasized the possibility of a long tenure of life, provided proper precautions are observed.

Relaxation, mental and physical, is the therapeutic keynote. The patient must readjust himself to living upon a lower plane. This involves a sharp reduction in physical activities, the cultivation of emotional control, and the delegation of business and financial responsibilities to others. Frequent vacations, preferably away from home, are invaluable. In severe cases a prolonged rest in bed will frequently induce a remission which may extend over a period of months or years.

Moderation in eating is imperative. Five small meals a day, followed by short rest periods, will prevent overloading of the stomach and thereby remove one of the most common precipitating causes of the anginal attack. The advantage to be gained from the interdiction of tobacco, tea, and coffee is an individual problem. In patients who are not susceptible to their action, a moderate indulgence in them will probably do no harm. The conservative use of alcohol is not only harmless, but in some cases may be of distinct therapeutic value.

The general management of angina is very well summed up in the picturesque quotation from Osler, who in 1910 wrote as follows: "The ordinary high-pressure business or professional man may find relief, and even cure, in the simple process of slowing the engines and reducing the speed from the twenty-five knots of a *Lusitania* to the ten knots of a black *Bilboa* tramp."

*Drugs:* The nitrites, since their introduction fifty years ago, have held first place in the treatment of the individual attack. Amyl nitrite, in the form of the familiar *perle*, acts the most quickly, its full effect being manifested in about thirty seconds. Because of its objectionable odor, its expense, and the short duration of its action, it has been superseded by nitroglycerin. A soluble tablet of one one-hundredth grain of this drug administered under the tongue, will usually relieve the pain in less than one minute and will exert its effect for almost one hour. Sodium nitrite and erythrol tetranitrate are not so readily absorbed and are more uncertain in their action. Morphine is rarely necessary in the treatment of the average case. As noted above, any attack which fails to respond to the nitrites and which requires large doses of morphine is likely to be due to coronary thrombosis.

Within recent years, several vasodilators of the caffeine group have been employed in the interparoxysmal period as a preventive measure. Theobromine and its derivative diuretin (theobromide sodium salicylate) are the most commonly employed; the former in doses of five grains, and the latter in doses of five to fifteen grains three times a day. The latest addition to this group, and probably the most effective, is ephylline, which is given in tablet form in a dosage of one and one-half grains after each meal.

While opinions as to the value of these drugs,



are varied, it is safe to say that they are effective in about fifty per cent. of the cases. In the writer's experience they have given most relief in hypersensitive individuals who are subject to short and frequent attacks, and who exhibit but slight evidence of underlying myocardial damage.

*Surgical Treatment:* The surgical treatment of angina pectoris was first practiced by Jonnesco in 1916, and consisted in a bilateral resection of the upper three cervical and the first thoracic ganglia. The object of this procedure is to prevent the painful stimuli which arise in the heart from reaching the central nervous system. The operation is purely palliative and has no direct effect upon the underlying cardiac condition.

During the past ten years a voluminous literature has accumulated, and the Jonnesco operation or some modification thereof has been performed many times in different parts of the world. This widespread interest in the surgical aspects of angina has stimulated investigations into the anatomy and physiology of the cardiac nerves and has resulted in a more complete understanding of the types of cardiac pain. Further researches along these lines give promise of bringing to light the exact pathogenesis of this rather baffling disorder.

Although a final opinion as to the merits of cervical sympathectomy is not yet warranted, there are now a sufficient number of observations to justify the conclusion that the results in properly selected cases are eminently satisfactory. Cutler in an excellent review of the subject, states that the results in twenty-seven cases treated by the original Jonnesco method were good in 62% and that an additional 18% showed some improvement. In fifty-three cases subjected to some of the more simple procedures, the results were good in 41.5% and improved in 35.8%. A discussion of the various types of operation is not within the scope of this paper.

The determination of the type of case which is suitable for surgical interference calls for an exact diagnosis, and a careful inventory of the underlying cardiac condition. The occurrence of a number of complete failures and of a few sudden deaths has made it apparent that there are certain cases in which the operation is absolutely contraindicated. Cases of grave myocarditis, as evidenced by cardiac enlargement, poor heart sounds, pulsus alternans, gallop rhythm, con-

gestive failure, and abnormal electrocardiograms should not be subjected to surgery. Disastrous results have followed operations on subjects with syphilitic aortitis and also in cases of coronary thrombosis. The importance of a careful differentiation between angina pectoris and coronary thrombosis in prospective surgical cases cannot be overemphasized.

We may sum up by saying that the operation is indicated in cases of crippling angina which have failed to respond to careful and complete medical treatment, and in which there is no evidence of myocardial degeneration, syphilitic aortitis, or cardiac infarction. In such cases it offers sufficient promise of relief to justify its inclusion in the therapeutic regime of angina pectoris.

1. Kahn, Morris H.: *Am. J. Med. Sc.* Vol. 172 No. 2, Aug., 1926.
2. McKenzie, James: *Angina Pectoris*. Oxford University Press, 1923.
3. White, Paul D.: *The Prognosis of Angina Pectoris and of Coronary Thrombosis*. *Journal A. M. A.*, Nov. 6, 1926, Vol. 87. PP. 1525-1530.
4. Osler, William: *Lumleian Lectures*, 1910.

#### DISCUSSION

Dr. Ralph McReynolds, Quincy: Dr. Durkin has given us another very fine paper. I am sorry I am not in a position to add something new on this subject.

Dr. Durkin's appeal to us for more thorough study of these cases is quite worth while.

I think they live a very miserable life at times because of the neglect of the physician. We render a bad prognosis; and, consequently, the patient is miserable for the few years which he may live.

Some one has mentioned that the doctors go to two extremes when we do get in a position to render a prognosis; one doctor telling the patient to go ahead and make his will; the other type usually telling him he will be cured. I think most of us desire not to go to those extremes. While not misrepresenting things to the patient, try to offer him some hope. Certainly we should not dismiss the prognosis too lightly.

We should go into the exact heart conditions, finding out whether we have any cardiac pathology. Not only that, but go into a complete physical examination; and, just as important, is the very complete history as Dr. Durkin has mentioned.

Regarding the matter of tobacco as an etiological factor, we realize, of course, it is not of a great deal of importance; yet I always regard tobacco with suspicion in all heart cases.

I am glad to hear that syphilis was passed over rather lightly because I do not really believe the statistics will bear us out in stating that it is a very great factor in the etiology. Syphilis, of course, is blamed for almost everything, and sometimes rightly. A case having syphilis with angina pectoris does not

necessarily mean that the syphilis has any direct etiological bearing.

I think it is generally agreed we should do away with the term pseudo angina. We can do away with it only by thoroughly studying our cases, being sure of the diagnosis of true angina and classifying the other cases as they should be.

There are a great many drugs other than those mentioned which have been tried out but I believe no others are particularly important. I thought at times that ergot gave me some results in two cases, but I do not believe that it has been found to have any particular value by most competent observers.

I believe it is important that the patients have some treatment with him all the time so that he can use it himself. I think if he carries sodium nitrate with him he has a valuable sense of security. It is not only the physiological effect of the drug but the psychological effect as well.

The surgical treatment at the present time, of course, is yet in the experimental stage. Its field of usefulness is limited because it only gives relief from the pain. McKenzie and others have questioned whether this is good therapy.

Dr. Victor McClanahan, Aledo: What is the name of that drug?

Dr. Harry A. Durkin, Peoria (closing): The drugs of the caffeine group are used for their vaso-dilator effect. Euphyllin comes in tablets of one and one-half grains. It is the most recent one and my impression is that it is somewhat more effective than the others. These drugs diminish the frequency of attacks in a certain number of cases.

I feel that the surgical treatment of angina has passed the experimental stage. When the cases are properly selected there is no question but that the patients get very definite relief. One of the objections that has been raised to surgical treatment is that it takes away the warning signal and enables a patient to go ahead; and without this warning, he may drop over suddenly.

But all sufferers from angina who have failed to respond to ordinary medical treatment, including rest in bed for long periods, are very willing to take the chance, if one can convince them that there is no immediate operative mortality.

I have not had any extensive experience with these cases but I have been able to follow one of the first cases that was reported in 1922, I believe. It was one of the first cases that found its way into the American literature and the operation was performed shortly after Coffey and Brown performed the first operation in America.

The patient was 75 years old with a perfectly normal heart except for slight enlargement. His attacks were so severe that he was taking 1/100th of a grain of nitroglycerin every 15 minutes day and night, and also morphin. He begged for any kind of relief.

Under local anesthesia the superior cervical sympathetic of the left side was resected. It was just a simple resection of the superior cervical sympathetic.

He experienced the most dramatic relief I have ever seen. He lived two years and died of carcinoma of the stomach. After his operation he was free from the terrific compression pain and the only sensation he experienced on moderate exertion was a pain in his left wrist, which was relieved by nitroglycerin.

## EDUCATION AND ORGANIZATION\*

WM. D. CHAPMAN, M. D.

SILVIS, ILLINOIS

There is evidence that organization is instinctive rather than a product of reasoning, but there can be no doubt but that reasoning and manipulation have had free play in the building and workings of organizations as we meet them in civilized living. Consequently organizations, whether political, social, religious, or for business, frivolous, or educational purposes, may deserve all or any of the descriptive adjectives which are applicable to individuals and their works.

The power of the individual is increased by organization, to the Nth degree. And so the high state of development to which present day organization has aspired, has raised the tensivity of living by that N factor, to a point where strings snap with increasing frequency.

With individual problems so highly organized as to have passed beyond the ability for change which one may have possessed under lower-pitched conditions, the individual must look to his several organization arms and fingers for the functionings which he may have preferred to do on a smaller scale for himself.

It may be truly said that organizations have come to function in amplification of the individual lives of their members, and a man of a half dozen activities must accept membership in as many organizations or allow himself to be lost beneath the magnified clamor.

From a standpoint of comfort, the lower-pitched situation would appeal greatly to many of us; but we have no choice: we work under conditions as we find them or as they are forced upon us. What were formerly matters of conversation and adjustment between neighbors have been promoted to be matters of diplomatic relationship between organizations. In such a contest that outfit will do best which retains the

\*Read before the Secretaries' Conference, Illinois State Medical Society, Moline, Illinois, May 31, 1927.



clearest understanding of its real purposes and is continually given the best understanding and cooperation among its interdependent parts—the highest percentage of its members. Uniformly, those members will profit most who exhibit the greatest interest and work with the greatest understanding of the entire proceeding. Understanding eliminates friction and friction can stop the working of any organization of parts. The member who joins and then refuses to inform himself in the ways and means of work has done himself a minimum of good and is doing his organization a definite harm.

Allow me to present a case report bearing upon our own organization and permit me to preface it with a question: Do you, an interested member, know why your organization sponsored periodic physical examinations for people who seem to be well?

The reason was that a situation was forced upon us. Either the members of the medical profession suffered an imposition which was thrust upon them or the organization itself must move in defense against an organization of selfish purpose, too powerful to be successfully combated by individuals. One immediate result of that situation is that today every man present is offered a physical examination by a service committee. The end result will reach far beyond that beginning.

An efficiency expert was able to demonstrate that if life insurance companies could avoid paying death claims they might make much money; deferred or less frequent payments, even, would be an advantage. Then it was shown that annual examinations of policyholders could be made a valuable means of deferring claim payments. So an operating company was organized as a business proposition, for gain, and their advertising department extolled among policyholders the physical advantages and the altruistic exterior of the new proposal. The costs of organization, advertising, and operation mounted to a point where profits would be deferred somewhat; immediate profits seemed more attractive than deferred profits and means were sought whereby the cost of operation might be lessened to permit of immediate profits. The outstanding soft and vulnerable spot of all appeared to be the examiner; his fee for making examinations might be cut and his position was such that he

could not adequately protest. Moreover, reduction at that point might be of size sufficient to change the balance of figures. The plan was inaugurated and examiners were notified that they would be paid at the impossible rate of \$2.50 each.

Now, the idea of an annual physical audit had merit. But if it had value for holders of policies it had the same value for other people. That individual examiners should be forced to work for a cheapened fee or be put in a bad light of refusing to help their friends and clients, was an imposition which medical men had never deserved at the hands of insurance companies. The examiner-practitioner was in position to do nothing; if he attempted to explain the situation to his best friend, he was on the defensive and sure to be questioned. His organizations, national and state, were not so handicapped; they could speak without their hearers feeling a personal argument; and they did speak in defense of the individual against an organization. The A. M. A. through its house of delegates published the opinion that physical examinations for well people are helpful and should be encouraged. The ISMS went further than that and approached selected lay-organizations with whom it is in frequent contact and suggested that their members be advised of this situation which might be turned to their personal advantage. The value was plainly visible to these organization workers and they were glad to advise their members that competent authorities were all agreed that one of the best personal bets in the field lay in periodic health inspections by their family physicians. They had the interest of their people at heart and nothing else; being free from the necessity of exploiting the idea for moneymaking purposes, they felt it entirely right that the actual fulfillment be left among the two individuals interested; one member of theirs and one member of ours, a service and a fee; a clean transaction with benefit to both, but at a fee commensurate with the service rendered. That situation is easy to understand and is one whose acceptance would arouse a very minimum of argument, but it can be of no value at all to a member of our organization who refuses to put himself to the trouble of hearing about it; neither can the instructive value be of any use to a member of one of the affiliated organizations

who will not listen to the suggestion and draw a personal inference. Few worthwhile things will be brought to anyone and forced upon him against his will. Most services which organizations can render are limited by just the extent of cooperation accorded by their own members. Members do not cooperate unless they are informed and the overcoming of inertia is the greatest obstacle to efficient functioning; the friction of inertia absorbs power.

In order that our members may be made more fully acquainted with the details of this proposed service, a working committee has agreed to make practical demonstration throughout this meeting for all who are interested. The service can be of no possible use to any member so cold as to feel himself not at all interested in what other members are doing. With similar ends in view your council has fostered the formation and service of liaison by committee with county societies, direct. It offers opportunity for any county society which wishes to keep intimately in touch with state society plans and purposes. It offers nothing to any county society which prefers not to avail itself of such a liaison and it has a sincere wish to avoid disturbing such a society beyond making announcement that the service is available.

The instance cited above serves as one of a type, nothing more. It is timely in that a number of lay service organizations are at the present time advocating those examinations. It seems proper that our organization associate with other reputable organizations in precisely the same manner and spirit in which a practitioner works socially among the other reputable citizens of his own community. But it also seems that the acts of our society along that line are less than half done until, in each instance, our members and our component societies shall have been informed in so far as may be possible, of just what has occurred. If a member of a speakers' bureau operating under the direction of a society committee, recites for a lay club certain generalities which have been checked and found to be safe and sane; much of the good of the contact will be lost unless at about the same time the practitioners of the immediate community may be informed of what took place. Hence the desirability of a liaison through which the county society may say when and how much organization

assistance they find desirable. At a time when organizations of irregular practitioners affiliate with labor union organizations for the purpose of effecting lobbyist influence upon legislative organizations against such reputable and established enactments as medical practice acts, the value of our cooperating with congenial organizations in the matter of keeping public opinion informed, cannot be gainsaid. We all agree that the work performed by individuals is the final test of fitness of the medical profession, but we must and do also recognize that private practice alone is not the fashionable 1927 method of molding or steadying public opinion. Public opinion varies with emotionalism more often than with logic.

And so a situation exists in which the individual who would enjoy comfort in his work must bring influence to bear upon the setting of this stage. The best influence is effort expended in an orderly and organized manner by which his power is amplified to a reasonable proportion with the influences which he must combat. The organization which enlists the understanding and help of other organizations in its work is doing nothing different than the individual who, with an amiable and willing dignity, strives to convince his neighbors of the worthiness of his own work and to enlist their approbation of what he does. The work of praiseworthy organizations is as manysided as the work of their members; a laudable aim seems to be that each occupy the same relative position as that held by the conscientious member in his own community. In this manner only, can the amplification of influence avoid being distorted. An organization which fails to properly reflect its members is not fulfilling its destiny and is not working to the advantage of those members. Being almost entirely a matter of teamwork the speed of operation is reduced and effort must be neverending.

The success of a continuing process depends upon a constant supply of replacements; men who have already demonstrated their ability to work and who are willing to work in team fashion. Teamwork submerges the individual in a common effort and an organization which allows itself to be dominated or to degenerate into what has been called a "one-man" team will not function to capacity until it shall have remedied that error. The field is broader than that.



Education is the acquisition of knowledge or of skill or the building of character, and is not, primarily, the giving of those things to others. The value of an organization and the building of its character depend, above all things, upon this acquisition of knowledge and skill among its own members in such fashion that all of its interdependent parts may function with completeness and in harmony. The functions of a county medical society are not limited within the borders of that county. That society is an interdependent part of working organization and, while fulfilling its obligations to its members and to other county organizations, should bear in mind that it is also a training camp of the American Medical Association.

A general failure of county society work or a failure to coordinate in the formation and works of the larger societies would effectively end both state and national efforts as bodies at all representative of the country at large. And in that representative spirit lies the individuality of these groups whereby they must remain distinct from all special societies or societies of special purpose.

Volunteer educators of others may make themselves so obnoxious as to become a public nuisance. The United States has seen much of that especially as applied to proposals of selfish purpose other than character building. But the best and surest antidote to organized teaching of unsafe or unsound nature is the dignified but outspoken opposition coming from organizations of character. Our public does recognize character in organizations just as it does in individuals. In the building of good organizations, the acquisition of knowledge, skill and character is essential; but such a proceeding will have no practical value unless used in an organization way in a public manner, always bearing in mind that the personal advertising of self-styled stars is neither an essential nor a desirable part of any good organization's public policies. A good student may be of little use to society unless he will so display his acquired knowledge that it may be used.

An organization should be jealous of its reputation, a thing which is in the hands of its members. If a member has fault to find with the outfit or with his fellow members, all men recognize that he has recourse within the organization.

If such a member is so illy bred or so forgetful of organization discipline as to carry his peeve or his little opinion to the outside, for the sake of seeing his name coupled into flashy or startling newspaper headlines, or for any other reason, we may feel assured that he has damaged himself in the minds of gentlemen very much more than he may have injured his organization. However, no organization has any member whom it need hesitate to discipline when occasion arises.

You will realize that I have presented nothing new; that was intentional. But it seems highly desirable that this group frequently consider all of the purposes and the possibilities of organization. With us this is a group which is largely responsible for the smooth functioning of our organization of parts. Stimulation of thought and the furthering of smooth coordination are among our greatest assets, for we are judged by our works.

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#### PROBLEMS OF THE COUNTRY DOCTOR\*

R. F. LISCHER, M. D.

MASCOUTAH, ILL.

Most of you have practiced medicine in the country, once upon a time and are familiar with the country doctor's life—you know about our victories and our failures, "our ups and downs"—our trials and tribulations. You also know that hard roads and the automobile have brought the modern hospital to the very door of the farmer and, practically speaking, that means that we have expert competition in our field. More than ever before we must cling to the "spirit" that is expressed in the "Oath of Hippocrates"—the spirit of love for medical science. The old time custom of the country doctor sitting high up on a perch with individual craftsmanship is over and gone. Co-operation, specialization, centralization, medical team work, complete medical units, etc., are the key note of the present age, and they are a boon to humanity.

This means that we must send some of our patients away to the modern hospital. Years ago when we were called to a fracture case it was understood that we were to take care of it from start to finish. If we had a poor result, that was

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all right; everybody had bad results in fracture cases once in a while, and it was our custom to tell patients at the start that they may get a poor result. We could promise nothing in advance.

But now modern medicine demands that we x-ray our fractures and all serious cases are treated at the hospital. While country doctors are on the look-out for secrets in all the branches of medicine, it is impossible for us to keep abreast of the staggering new discoveries coming in too fast and too numerous for any individual to master and yet too important to ignore.

So it is imperative that we send some of our patients to the hospital in the city where they can receive up-to-date treatment; and the result is plain. Our area is limited, and that means less work at home. One by one, country doctors face the "setting of the sun." Small villages that used to support a doctor now have none. Towns that could support two now only have one, etc. The question arises, "Where shall we send our cases?" I can tell you. "The wind bloweth where it listeth. Thou hearest the sound thereof but knowest not whence it cometh, nor whither it goeth." If our county society is "asleep at the switch" and does not furnish us with a good medical unit, we take our patients one step farther, to the next county, where they do better work and are more up-to-date.

Thus we find county societies in the state of Illinois that are strong, well organized and have good leadership, regular and well attended meetings, good scientific programs and who issue bulletins regularly so that their members may all know what is going on; societies that foster public health and hygiene, tuberculous sanitariums, and other public work; and so on, down the line, until you get to county societies that scarcely ever meet, that have few scientific programs, and where there is no co-operation of members.

We grant that the modern hospital is a boon to humanity and a great step upward in the treatment of disease. But on the other hand it does not combine the "human touch" with the art of healing as did the old country doctor. He knew all about the family history of his patients, and saw human nature in absolute nakedness—"He knew about their sorrows, their frailties, their fears their disgrace,

Their follies and ignorance or the shame they must face,

Their emotions, their anger and errors that hurt, Their hatred, their meanness, their poverty and dirt."

"For either extreme of both grief or joy,  
Will influence metabolism and the patient annoy."

You all remember the tradition now passing into history of the old village doctor. He was not only their physician, but in all public matters he was their leader, their teacher, their guard and their guide; their councilor, their comforter, their village pride.

But such a reputation is a great charge. It means that you have to walk the "chalk-line." And walking the chalk-line is not always so easy when you consider the environments we sometimes have. About thirty-five years ago Dr. Carl Rembe, who is now a prominent surgeon in Lincoln, was practicing medicine at Fayetteville, seven miles south of our place. He was the "Idol" of the town. And when he left there—the entire community mourned as tho a great calamity had happened. But since hard roads came no doctor can make a living at Fayetteville. They haven't had a physician for the last ten years. The same thing was true at New Baden about eight miles northeast of us. Formerly they had three doctors there. Dr. F. M. Edwards, who is now a prominent surgeon at Centralia, used to be the "Czar" of New Baden years ago. No one can deny that the so-called "human side" lifts the practice of medicine above the level of the mechanical and technical plain, bringing it above the commercial and business world. "Man should not live by bread alone," and he who dabbles in laboratory stuff only, or even the fellow that specializes, may fall into a rut, and his horizon becomes crimped so that he may fall short of seeing the great aspects of life.

Back in the '80's there was a Centennial Exposition at New Orleans, and our neighbor, who was a sort of a country lawyer, a fire insurance agent, justice of the peace, and Civil War veteran, decided to go down there and see once more the old camping grounds of the Civil War. He took two other veterans with him and they were anticipating a hilarious time. But this fellow had been in the habit of getting his whiskey



every day, in other words he brought home a little jag every night, and while they were on their way south, they imbibed a little too much, and by the time they arrived at New Orleans he developed a right smart attack of delirium tremens. It was the custom in those days for people who traveled to carry a revolver and the first thing they knew this fellow planted himself in his room at the hotel, took out his pistol, and imagining that the rebels were after him, threatened to shoot the first man that would dare to enter his room. The hotel manager was about to call in the police, when his two companions interceded, bribed the hotel man, and stood watch over their unfortunate comrade. They did not know that he had already written a letter home to his good wife, the mother of five children, that the "Rebel farmers had taken him into custody and would kill him before this letter would reach Mascoutah." The poor wife upon receiving this letter, went into hysterics. The first thing she did was to call in the neighbors ( a good neighbor close by is worth more than a relative afar off). Next they called in the village lawyer for advice. The village lawyer saw where he was getting a job so he suggested that he go down to New Orleans to bring the body home, dead or alive. While making arrangements to finance this trip hysterical attacks overtook the grief-stricken mother anew, so they had to call in the family doctor. And here is where the human side comes in. He said, "Good lady, don't worry about your husband. I can see through the whole thing. He was used to drinking his whiskey and on the way down took a little too much, causing an attack of delirium, and his comrades no doubt know nothing about the letter he wrote you and are trying to keep this thing a secret. Just wait a day or two and all will be well." Like a flash the fear and anxiety changed to humility and shame.

Now, folks, that was better medicine for her than any drug store could ever put out, and the truth of the matter was, just as the doctor suggested, they all came back home a few days later, and sorry that the story leaked out. Had they called the family doctor in the first place, all would have been avoided.

Now here is another example of the "human" side. A Spinster old maid school ma'am (whom God had not endowed with a desire to have a

home of her own) but who found peace and recreation in the study of the Arts and Sciences (especially Christian Science). She knew all about the weaknesses and frailties of men (though she never had a love affair of her own) and from book-knowledge knew about the horrors of "damaged" goods. After the age of Fair, Fat, and Forty," a certain old bachelor in the community started to shower kindnesses upon her, her stern heart of stone softened and became as pliable as fresh putty, and one night when John Malden proposed she was so overwhelmed that she could not give him her answer without first taking his question under advisement. With her wide range of knowledge of the sins of the world, she wasn't going to buy a cat in the bag—she would first investigate. And where did she go for information? Not to the "sooth-sayer," nor to the divine healer, nor to the Christian Scientist, but straight to the old village doctor who had given both her and him their first bath when they were born and who knew all about them. To wit: "Well, doctor, I've got a surprise for you this morning. I'm about to accept John Malden in marriage and came here to find out about his health." "Well! well! Marthy, that's sure a surprise to me. I'm very glad to hear it. John's a mighty fine fellow. He has the heart of a free man—unspotted and unstained by the sins of the world." He knew what sort of information the old maid was after. "Thank you, doctor." "Do you think that his constitution is sound?" "Oh, Marthy, he's strong and efficient, he's got lots of pep and he'll make you a fine husband." "Is his stomach all right?" "Fine. He has the stomach of a Billy goat; he'll eat anything you put before him without whimsing—makes no difference what it is." "Is his liver all right." "Yes, he has even an under-production of gall so that his temper is as mild as milk and as soft as silk." "Are his kidneys all right?" "Yes, his kidneys are all right." "Are you sure?" "Yes, I passed him for life insurance not so very long ago." "Well doctor how does it come that one of his kidneys hangs down a little lower than the other one?" "God Almighty who divinely hung the stars in the heavens, also hung the 'kidneys' on man and he decided that one 'kidney' should hang a little lower than the other one and it was good."—And they lived happily ever after.

Now in closing I wish to say that "Co-operation" within your county society is the "watch word" of the hour. Try to have regular meetings and do your best in getting up interesting and helpful programs. Theo. Roosevelt once said "Every man should contribute toward the profession to which he belongs." That doesn't mean that he should merely pay his dues, but it means that he should give of himself, his heart and his mind and his spirit to the general cause of his county organization.

If your adjoining county has better specialists than you have—if they are ahead of you on the mechanical and technical side, that does not mean that they should also be ahead of you on the so-called "human" side. And here is where the secretaries "shine." You can exercise a silent power, or personal influence, to bring about harmony and a spirit of co-operation in your own county. Go after your fellows and bring them to the meetings and make them take part in the discussions. That's what counts.

Perhaps your greatest task is to keep the country doctors in line, so that they don't "kick across the traces" and send their "cases" to distant places. But you need the country doctor. What is a medical unit worth that does not include the country doctors to bring in patients.

Hence, our problems are also your problems. And we want to say to our county society,

"Intreat us not to leave thee

Nor to return from following after thee.

For thy people shall be *our* people

And thy God—*our* God."

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#### OUR GREATEST DEBT\*

EDWIN P. SLOAN,

BLOOMINGTON, ILLINOIS

After that nice introduction, you certainly have a right to expect a very fine address and you are going to be disappointed.

Every individual practicing medicine from the time of Hippocrates and Aesculapius down to the present time, whose fame has lived, had a secretary. All of them had some sort of an organization and if you delve close enough into history, you will find that the majority of them

were usually controlled in a great measure by their secretaries. From the time of those early famous men, down to the present time, when so many eminent men in our profession have made themselves famous and got their pictures on the front page of the newspapers, and have even written articles for the *Ladies' Home Journal*, lauding the idea of what a wonderful privilege and pleasure it is to have a baby under their guidance, there have been individuals who have achieved well deserved fame and honor for scientific and professional accomplishments.

When you think about it, none of these individuals could have accomplished much as individuals without the aid of the work of others; their accomplishments would have been impossible without the aid of organizations such as our County, State and American Medical Associations. In the present day and age perhaps the greatest help to individual accomplishment is furnished by the American Medical Association, a great and honored organization. But the American Medical Association could not exist without the State organizations and those back in the counties. And in the majority of the counties, in the whole United States the organization in that county is dependent entirely upon the secretary. You can hear almost every man, in giving the history of his county society, say, something like this: "Our society didn't thrive for three or four years, because our secretary was no good." Or, "We are doing pretty well now, because our secretary is good." Sometimes it is said, "Our society got along first rate as long as we had so-and-so for the secretary but the new secretary doesn't seem to take much interest, and we are not getting along so well."

So when you think of the great debt that not only the members of our profession but all the people of this great country owe to the Secretaries of these county societies you realize what a great individual the county society secretary really is and your first thought might be, Here is a man who has been sung in song and story and lauded in the newspapers and medical journals and even recognized in the pages of the blatant magazines. But alas! Not even in our own medical journals have we given him the credit that he deserves. We seem to have forgotten that from the standpoint of the saving of lives, prevention of suffering, advancement of

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\*Read before the Section on Secretaries Conference, Illinois State Medical Society, Moline, Illinois, May 31, 1927.



Science and of the medical profession in general that the County and A. M. A. secretaries have quietly and efficiently contributed directly or indirectly to every one of the great accomplishments of which we are so proud. When it comes down to the actual facts of the matter, the greatest debt of science, of organized medicine and of the people themselves is to the county secretary, the secretary of the state organization, and to the secretary of the A. M. A.

#### DISCUSSION

Dr. E. W. Fiegenbaum, Edwardsville: Madam President, Ladies and Gentlemen: I took it for granted in heading the program that I was to discuss only Dr. Lischer's paper, "The Country Doctor's Problems," he being a country doctor like myself, my honored friend and neighbor, from St. Clair County. However, I will try to discuss these papers in a general way.

I find myself somewhat embarrassed in being asked to attempt to discuss this paper, because he has touched upon so many different subjects in his paper. He has touched upon so many organs as well as organizations; it would weary you if I were to discuss all the fine points he has made in his paper.

One of the problems of a country doctor is to do what Dr. Lischer did just a few minutes ago, and that is to read a paper in any section of the state medical society. The opportunities are given to him so seldom he has not the experience that the city doctor has. I must congratulate Dr. Lischer upon making the best of his opportunities and presenting a good paper.

Our problems are no different from those of a city physician. The only difference is that we must fight our problems alone. We have not the experienced help at hand that the city physician has, and we must depend a great deal upon our own natural resources. I am very happy to say that phase of our problem is rapidly vanishing. With the hard roads and the automobile, the establishment of first-class hospitals, even in country towns, that do good work, our problems have been reduced to a minimum. Almost every good-sized country town, nowadays, has a strictly up-to-date x-ray machine and operator. So that our fractures, our cases of gall stones, and so on can be as readily diagnosed and as readily treated as they can be in the larger cities.

Time was when we were an isolated bunch of practitioners, far removed from the centers from which we could derive help, and many and many a time the country doctor had to sweat blood over some of the problems that confronted him. The rising generation of young doctors who locate in the country towns, and they are very, very few, will never know what the average country doctor had to undergo in the earlier years of his practice. But as the years roll by, our work is becoming more and more easy, and we can do it with greater comfort to ourselves, and I may say with greater success.

I want to touch upon a problem that probably the

doctor didn't mention, among the various problems in his paper, and that is the problem of medical organization among the country doctors. We have progressed in that direction a great deal, and still there is lots of work to do. Somehow we cannot get the average country doctor to become enthusiastic about his county medical society. We may have a large membership in a medical society, but almost invariably the attendance at the regular monthly meetings of that society is entirely out of proportion to the number of members that belong. We still have a great many members who think they are in good standing just as soon as they have paid their dues for the year, and leave the work of the society and the sustaining of the medical organization in the county entirely to a band of the faithful who come to our meetings, read papers, join in the discussion, and are the blood and sinew of the medical organization.

This is not as it should be. I don't believe that a doctor discharges his duty to the medical organization in the county merely by paying his dues. He ought to take an interest in what his society is doing, help formulate the policy of that society and bring that society up from a non-entity until it becomes one of the most prominent medical societies in the state.

Dr. Harold Swanberg, Quincy: In the language of the vaudeville stage, Dr. Fiegenbaum is a hard man to follow. I want to take this opportunity to compliment Dr. Fiegenbaum, because I believe he has set a wonderful example for the rest of us secretaries to follow. A man who has served as secretary of his society for nearly a quarter of a century, and has engaged in the practice of medicine for over half a century, and is still able to show the enthusiasm that he does, is certainly an exceptional example for us younger men.

I want to emphasize what Dr. Fiegenbaum has said in regard to the country doctor, and his comparatively poor attendance, at least in many sections, at county medical society meetings. Gentlemen, it is a problem. It does not make a great deal of difference what kind of a program is to be presented, it is hard to get many of these fellows to attend the meetings. There are many exceptions, of course, but I am referring to the mass of country practitioners, and that consists of hundreds of physicians throughout the state, who are members of their local society, yet neglect to attend their local society meetings. What can we do? The county medical society is really a continuation of the medical school. It is the post-graduate educational factor in our medical life. It brings to the doctor the new things in medicine, and yet these men stay away from these meetings.

Formerly, they blamed the roads: You know what kind of roads we have now. Illinois is the greatest hard road state in the United States. But the country doctors have not increased their attendance at county medical societies, in proportion to the rate hard roads have been built. It is a problem. I do not know the solution. We have found out this much in regard to our own territory. If you hold the medical society meetings at night, you cannot get the country doctors out. If you hold them in the afternoon, in Quincy, a

city of 40,000 population, you do not get the city physician to attend. We are endeavoring to solve this problem of the country and city physician, by holding, several times during the year, daytime meetings. Last fall we had a meeting that occupied one afternoon and one evening. We secured some of the best talent in the United States, and had a very good attendance. This year, we are going a little further and make it an all-day session. There is to be a program in the morning, one in the afternoon, and another in the evening. The best talent available will be procured.

We find that distance is a factor in getting men to attend, regardless of how good the speaker may be. If he comes from a distance, they think he must be good, principally because they have never heard him before.

I believe there is one thing that the Secretaries' Conference can do, and that is to work up more of these district meetings. Whether they are to be held in the particular council district, or in some large city, is yet to be decided. But, we should have more of these district meetings with a good all-day program and attempt to induce the men in the territory surrounding the meeting place, to attend.

Dr. Lischer certainly presented the human side of the practice of medicine, in a very unique and interesting manner. It does one good to hear a paper of this type, because we must be amused as well as instructed.

I feel that few of the secretaries here appreciate the splendid work the Scientific Service Committee is doing. It is a wonderful accomplishment. Just think—the program committee, or the secretary of the county medical society, practically does not have to consider whom to get, for the program. He glances over a list of speakers and their subjects, chooses what is desired, and the rest is all taken care of for him. So far, our local society has not availed itself of the work of this committee. We have felt that we did not wish to burden the committee, unless we were unable to secure speakers. But for the smaller, isolated county, I think it is invaluable, and it seems to me that the Council and the House of Delegates are doing everything possible to facilitate the work of the county secretary. He can have his programs arranged in a unique manner, bring men to his county who are among the best in the state, and I am wondering if there is not some better method by which we can induce these fellows, in the smaller towns, to come out and hear what has been prepared for them.

Dr. R. R. Ferguson, Chicago: Madam Chairman, Mr. Secretary, and Friends: I just want to make three points, all of which have been covered in the papers of Dr. Bougher and Dr. Chapman. Both have brought out this one point: that the County Medical Society is supreme in everything local. Dr. Chapman's paper made that very strong, and the Scientific Service Committee and the Educational Committee have long ago taken the stand that they never interfere with the County Medical Society, they only suggest and anything they have to offer is only at the request of the County Medical Society.

Just recently the Educational Committee has been

approached regarding the baby clinics that have been at the county fairs, and one or two counties have intimated that it was not their desire to have the department take charge of said baby clinic this year (I mean the State Board of Health or the Child Hygiene Department) and we can assure you that where those people are not wanted they will never come into your district and when they do come into the district they will always come to the secretary and the president of the County Medical Society.

Hearing Dr. Chapman's paper brought to my mind a thought with which you are all familiar. All this work must be done through the county secretary, especially Dr. Neal's work in the legislative campaign. The secretaries seem to be the ones we have to appeal to. We have been using physicians and physicians' time for the people's benefit. We have been organizing physicians into groups in the different county societies to go to the legislators and to the senators, explaining our position on health problem and asking them to kill the obnoxious bills.

When I say obnoxious, I do not mean particularly obnoxious to the medical profession, but I mean to the practice of medicine in the state of Illinois, and to the detriment of the people of the state. It seems to me it might be a good plan in our association with the Illinois Federation of Women's Clubs and the Parent-Teachers Association (both of which are certainly standing with us 100 per cent. on those things) with whom we are working 100 per cent. on most things, that when these measures come up before the legislature that we go to the women's clubs and the Parent-Teachers Association. I speak of those two especially as I feel that we can get help from them in connection with the senators and representatives throughout the state.

This thought has come to me simply because the chiropractors are going to their patients, asking them to send telegrams to their senators and representatives. I believe it is a thought we can take home to ourselves, and if we can use the influence we have, it may very materially aid ourselves. When I say aid ourselves, I means especially will we aid the people of this state in not having these irregular practitioners practicing on them.

I have no fear for the practice of medicine for the future. I believe that medicine is a substantial science. I believe that the endowments for medical work and the state universities have placed medicine on a pedestal which none of the cults can ever attain, because it must have a real foundation and a real science to have endowed universities.

The only thing we have to be careful of is that we do not allow those cults to get into our universities, which they are trying to do at the present time and I believe that every man should get down to business when the time comes to stop such obnoxious bills. The secretaries are the ones through whom we have to work.

I enjoyed all of these papers today. I believe there is a great deal of work that the county secretary can do,



a great many things that individuals can bring to his attention, which will be helpful in such a conference as this.

Dr. G. Henry Mundt, Chicago: I made some notes as these papers were being given. Unfortunately I did not hear all of Dr. Chapman's paper, so I cannot discuss that. I don't know whether all of you read the report of the secretary of the American Medical Association as given at the last meeting in Washington. If you did not, it may be a source of considerable pride to you to know that Illinois is the best organized state in the union. I think that is something for all of us to throw out our chest about and to congratulate the secretary, the council, and everybody interested in the State Medical Society on. The largest proportion of doctors in any state belonging to the state society belong to the State Society in Illinois.

I want to correct one little thing Dr. Lischer said, and that is in connection with his quotation from Roosevelt. Roosevelt said every man should devote a portion of his time to the advancement of the profession of which he is a member, and that is a very material improvement. It is a thing which should soak into everybody's mind. We should devote time to the advancement of the profession of medicine. There is no question about that.

Now I can well feel for the county medical society for two reasons. In the first place, I have talked to some of the secretaries and feel sorry for them because of that. But the main thing is that I don't know how you maintain the interest you do maintain in the county medical society, where you have eight or nine meetings a year. It seem to me it would be a fine thing to have more, yet it is not practical to have any more. The majority of men in Chicago, I think, go to many more medical meetings than that, and I think the county secretary has done a real thing to hold up the interest among the country doctors, where he has only eight or nine meetings a year to shoot at.

The thing I want to bear down upon, and which I think is very important, is that medical men in their own societies should be on the programs of their county medical societies very frequently. I believe the importance of local men on the program cannot be overestimated. The value of belonging to a county medical society will be very materially increased if a man enters into the scientific discussions in his own organization.

Dr. William D. Chapman, Silvis: Madam Chairman, Ladies, and Gentlemen: I have done most of my talking, but since reading my paper I have heard two things which I considered especially good coming from this meeting. One was Dr. Mundt's remark that every man should read a paper before his county society frequently. I believe if there is any one thing that has more to do with the life of a county society than all others probably that is the thing. The man who will work up a paper, I don't care on what subject, will develop an interest for himself, and probably for another one or two or three men with whom he comes in contact which cannot be developed in any other way.

To have outside speakers brought in for the county society program entirely, I am sure is a mistake. It is fine at times and necessary, but it never can be made to take the place of the individual work on the part of the members. I think there is nothing in the way of educational effort that can be worked out by somebody else and handed to a man. He cannot be made to accept it against his will. If he can be given the enthusiasm or the will to work, there will be no problem of lack of interest in the county society, for it is a matter of interest, and interest, like happiness, is a state of mind. I can well understand the keenest interest in a society of eight or nine members. The interest is entirely a state of mind of those members.

The other thing I was especially pleased to hear before this conference was Dr. Bougher's presentation of the work of the Scientific Service Committee. I think that should not be allowed to pass without discussion, because it is a phase of the organization activity in which the county society is included, and it can be made just as good or just as bad from a point of efficiency as the several county societies wish to make it.

I rather suspect possibly Dr. Bougher or the chairman of the committee, may have had a little bit of the same idea in mind that I had, and I plead guilty to deliberately striving to start an argument. I made several statements this morning which were deliberately intended to start an argument, if it were possible. I want to know for one thing whether the members of our county societies in Illinois approve of the idea of organizations taking place in a public way in the same relationship which individuals bear to their neighbors and friends. Should our organization, our state society and county society take part in these activities in competition with the work of other organizations?

We have not heard, for a number of years, much about a lack of ethics or failure of good taste in a man or organization standing up frankly to state its position. It used to be generally accepted that a doctor must take everything in silence; it was generally pretended that it was accepted, and I am not sure it ever was entirely true. I am quite convinced in my own mind that was not a good attitude. No knowledge can be of any use unless it is given free play, unless it is explained to the people upon whom it might exert an influence, thus being made useful.

The work of that organization committee or that Scientific Service Committee which Dr. Bougher has reported to this conference is not a new thing and not a loose production. It represents work of some four years standing on the part of our members and should be presented to this conference with the idea that it receives discussion and correction and improvement and acceptance or condemnation, a thing which is very important to the committee, and some of us think to the county society and state organizations.

It would please me very much to hear that work gone into rather extensively at this meeting.

In conclusion, I would like to say that I have gotten very great pleasure in the last few years out of watch-

ing the Secretaries' Conference grow. I don't know how long it has been since I missed a meeting of the Secretaries' Conference, but I shall not miss one in the future if it is at all possible to get here. It has been a pleasure to watch the interest, the assimilation of thought, and the discussion, which have been acute the last few years. I would enjoy hearing more discussion on Dr. Bougher's paper.

Dr. Adles, Du Quoin: It has appeared to me in the conference here in the remarks of the gentlemen experienced in organization and propaganda that they would want the doctors to come together more especially in those counties where they don't have even seven or eight meetings a year, perhaps two or three.

Dr. Bloodgood visited southern Illinois about a month ago, and I was happy to meet the doctor, and see the ladies taking the interest they did, and filling the hall, as they did in such large numbers. Perhaps some of our secretaries here witnessed the same situation. If we have men of that caliber coming to us in those counties where we have poor organization (and I believe our Secretary, Dr. Benner, will agree with me in that) I think we would have more success. When Dr. Bloodgood came to Benton, Illinois, there was not room enough to hold those in the community who came in large numbers. The ladies are very active wherever they are, I know, but somehow or other it seems the southern Illinois ladies are a little more active than the Chicago ladies or those up state. It may be I just think so because I live in southern Illinois, but it seems our southern ladies take great interest in the good things.

I think it would be well if we would suggest to our good men and women who have a way of doing so without this bombastic advertisement, that they present the matter of high blood pressure.

We in Du Quoin have what we call the state fair. It has brought in there a community of practically one-third of the state. If we could have the voluntary action of some good man to come in during the time these activities take place, I think he could do much good. He could tell the lay people what our doctors mean when they say they don't approve of the work of the osteopaths, chiropractors, and so forth. He could prove to them they are worthless. The articles in the paper written by our Dr. Billy Evans have done much to prove that the doctor is an honest man; that he does not mean to advertise or fill his pocket full of money.

This is my first presence in attending the conference. In coming so many hundred miles, I wanted to make my voice of benefit, if I could add anything.

Dr. Bloodgood has shown, in our county, what he did through his presence there. I believe it would be well if Dr. Bougher had a doctor to send to our county fair this year, and then make the county doctors come out and help. You cannot get them out for an ordinary meeting. Last year I was instrumental in having 350 children examined by the county nurse. They know the doctors are the guardians and what they have done to improve the babies.

All these things are good work on the part of the doctors, and it would really bring the country doctors together more and make them organize more if we had these men come to us and help us in that way.

I don't want to bore you, but to give you an idea of what we would profit by. I think we would profit by entertaining a body of doctors who can bring to all the people something good. There is the question of blood pressure. A good many women are not eating what they should and think they are doing right. They may starve themselves into an anemic state. I believe, as Dr. Lischer said, a lot of people think they have liver trouble. I think it would do a great deal of good to have a doctor come to a fair where so many thousands of people are gathered, and hear a really honest man advise them as to what is really good for them. None of these other people can say we are doing things like they do them; this will be eradicated.

Dr. Thomas Parran, Jr., Assistant Surgeon General, U. S. Public Health Service, Washington, D. C.: Madam Chairman, Ladies and Gentlemen: I am sure you will think it very presumptuous for a person who is not a practicing physician to discuss with the Secretaries problems of medical organization and the problems of the general practitioner.

The discussion of every medical meeting I have attended in the past several years has centered around this problem of the practice of preventive medicine by the private physician. I have been very much interested and have followed for the past several years the work of the State Medical Society, which is now being carried out through your Scientific Service Committee, in the education of the public as to the facts of medical science. Particularly valuable has been the cooperation which this Society has developed with other organizations, in the interest of promoting the public health. To my mind, one of the most significant advances in medical organization in this country is being made by the Illinois State Medical Society through its work in the health education of the public, and through its work in carrying post graduate courses to the physician. After all, the several aspects of this work can best be summed up by saying that it seeks to stimulate, on the part of the public, a desire to seek medical service when the disease is in the incipient stage, before it has gone to extremes; to seek that service when the physician can be of most help to the patient in giving the hygienic medical advice and treatment which will often be efficacious in warding off premature disability and death.

Again, this work of the Scientific Service Committee should do much in bringing to the attention and to the realization of the average physician in private practice the knowledge that there is a great unexplored field in the private practice of medicine, in the participation in preventive medicine, which is the work of the general practitioner. There lies, it seems to me, the hope of increased financial reward in the practice of medicine and, of more importance, there lies the greatest service which the medical profession can render to the public.



When any great need exists in medicine or elsewhere, that need sooner or later is met. There is a great need for more medical service, earlier medical treatment, and more adequate medical service for the great mass of the people, in other words, a preventive medical service. And to the extent to which the private practitioner fails to utilize his opportunities to practice preventive medicine, to that extent will it be necessary for health departments to meet the need in this field, which largely should be that of the private practitioner.

All of us seem to agree that the solution of this problem will be reached if every physician will practice preventive medicine and preempt and occupy the unexplored field, or largely unexplored field, of preventive medicine in private practice; and if medical societies interest themselves in educating the public to utilize this service.

Dr. W. J. Benner, Anna: I want to thank the members for their cooperation in making this program a success, and for the courtesy with which any of you have responded to any requests made of you.

Now I want to say something about Dr. Bougher's paper, particularly the work of the Scientific Service Committee. Down in Egypt, where I come from, we do not have very large societies, and have found it in our county society a distinct benefit to avail ourselves of this service.

We have had a number of men from Chicago down to talk to us and in each instance we feel that we have been distinctly benefited. The only drawback that I can see is that we are a little bit timid. We take it for granted that these fellows in the cities know it all. We do not like to take issue with what they say, and we do not get the free discussion we ought to have. We accept, or apparently accept, without question what they tell us, whether we believe it or not.

But that is all right. It stimulates us to more reading and better work, I believe. Besides that, with us, we are trying to stimulate an interest between the county societies, and we are attending the county meetings quite regularly for us.

In our county we have a membership of twenty, and our average attendance is about twenty-five per meeting. We hope to meet each month, and hope to be able to keep up this attendance. It is only by attending the meetings that we get the benefit or get an organization that is effective at all. I believe that the work of the Scientific Service Committee is good, in that it will help to bring out the men, and in that way make a better working organization.

Dr. Philip H. Kruescher, Chicago: Mr. Chairman, Ladies and Gentlemen: I had hoped that Dr. Hutton would come in to take up some of the detailed discussion of Dr. Bougher's paper. I am interested especially in the orthopedic work of that committee, and I would like to say this.

We have three or four very definite aims in mind. First, if the county societies wish, we want to furnish them with men, not from Chicago alone, but some of their own men down state, who will be able to educate, if you please along certain lines, and especially along the lines of the crippled child.

I believe there is no greater field in Illinois today than the field of the cripple and especially that of the crippled child. We get surprises occasionally from men from whom we do not expect such surprises. For instance, we get patients occasionally, children six or seven years old, with a club-foot. We ask them why they waited so long, and they say, "The doctor told us that was a good time to do it, about six or seven years." Of course, that is a good time to do it if you cannot do it before, but why wait until the muscles and tendons and tissues have become so firm that you can do very little, if anything, with them?

We have patients come who have congenital dislocation of the hip. They have been advised by their physician to wait until the child was four or five or six years old, because then the socket would be deep enough to hold the head of that bone out of place. The fact is that is just the time you do not want them.

The time to correct congenital club-foot is the second or third week after birth. The time to correct a congenital dislocation of the hip is just as soon as you can possibly make the diagnosis. Those are a few of the little hints the committee would like to throw out to some of you men who have no reason probably and no advantage of knowing certain things along certain lines.

We forget that there are 500,000 crippled children in the United States, that 267,000 are under sixteen years of age, and that to this long list, this great army of cripples, there is being added 67,000 each year.

Now Illinois has its normal quota, possibly a little bit above the normal quota of cripples. There are societies in the state of Illinois doing very definite work along the line of the crippled child. As Dr. Bougher has definitely stated in his paper, we do not wish to infringe upon or duplicate the work of those societies, but we do wish to carry on, if the county societies wish us to, in other directions where there is no such education, no such work going on, something from your parent, the Illinois State Medical Society, and specifically through the Scientific Service Committee; carry to the men a few little messages here and there that will help them in the management of the crippled child problem.

I said a minute ago the Scientific Service Committee desires to furnish speakers wherever they are desired. We want to go further and furnish speakers, not only for the doctors, but possibly for the education of the public; educate the public; educate the parent. When you educate the parent and get him to realize that sixty per cent. of the crippled children can be improved, and that twenty to thirty per cent. of the crippled children can be made independent, that must mean something.

Now we are willing to help. We are willing to furnish speakers. We are willing to help you. We have not worked out any very definite plan in the matter of helping the parents; nor have we finished our plans in our manner of helping the patient himself. So many patients could help themselves, if they only knew how, if they only had just a little bit of help, a little training. They could do things for themselves that would develop their muscles, straighten their spines, straighten

their feet, and make them producers. Those are the things we wish to do, the Scientific Service Committee, and especially do I speak for the orthopedic end of it, which is at your service at all times.

## FUNCTIONAL NERVOUS DISORDERS, THEIR NATURE AND GENERAL MANAGEMENT\*

MEYER SOLOMON, M. D.,

Associate in Neurology, Northwestern University Medical  
School

CHICAGO

Functional nervous disorders, also called psychoneuroses or neuroses, long neglected, yes, even despised, as they still are to a large degree, because they have no pathological structural basis, have been too long regarded as unreal, fanciful, imaginary, to be treated by disciplinary measures, derision or the like, or by a vacation or a rest in a sanitarium or elsewhere, and nothing more.

It was the experience in the late world war, because of the discovery of a large number of severe cases of this sort, affecting even many previously apparently healthy men, which helped very much to direct the attention of the rank and file of the medical profession to the importance and seriousness of this group of disorders. When an internist of the standing of Cabot estimates that about one-half of all cases of illness seen by the general practitioner are functional, there is need to pause and deliberate. This is especially indicated when we find that in spite of the frequency of its occurrence, there are still current among physicians as well as the laity the vaguest conceptions of what a functional nervous disorder is and its distinction from so-called organic disease, while others even go so far as to deny outright the existence of such disorders. Furthermore, confusion becomes worse confounded when we search the literature and find such various terms as functional, functional nervous, nervous, neurotic, psycho-neurotic, psychotic, non-organic, imaginary, simulation or malingering, mythomania, suggestion and auto-suggestion, mental, emotional, phobic, hypochondriacal, anxiety neurosis, anxiety hysteria, conversion hysteria, true neurasthenia, neurasthenia, hysteria, psychasthenia, obsessional or compulsion neurosis, minor psychosis, and others.

*The Relation of Functional to Organic Disorder.* Let us be sure that we understand that the following conditions do not belong to functional nervous disorders: major psychoses, such as dementia precox, general paresis, manic-depressive psychosis, paranoia, arteriosclerotic and senile psychoses, toxic, infectious and exhaustion psychoses, hypochondria; focal organic disease within or without the nervous system such as brain tumor, spinal cord disease, hyperthyroidism, early pulmonary tuberculosis, early pernicious anemia, hidden and unrecognized sinus disease, cardiovascular-renal disease, gastrointestinal and genitourinary disease, or organic disease of the other bodily organs or systems. In fact, all organic disease which produces general nervous and mental, somatic and visceral disturbance must be excluded. This shows the very great need of a careful, all-around, head-to-toes physical examination, including all necessary laboratory tests, to exclude definitely the presence of organic disease as a direct or indirect cause of the nervous condition.

Functional disorder may be superimposed upon the basis of organic disease, either without causative relationship between the latter and the former, or with indirect relationship through emotional preoccupation induced by and centered about fear of the results of the organic condition present. Organic disease, past or present, may be the starting point of an added functional nervous disturbance through mental intermediation with emotional preoccupation.

Emotional reactions may produce organic disease in two ways: 1. by producing fatigue and lowering of the general resistance because of anorexia, insomnia, irregular habits, loss of weight, etc., and so predisposing to various organic diseases, such as tuberculosis, hyperthyroidism, and related states; 2. by unduly disturbing organs already in a weakened condition from organic disease, as in coronary sclerosis, cerebral arteriosclerosis, vascular hypertension, and thus being the exciting cause of their final breakdown, as not infrequently in apoplexy.

*What Functional Nervous Disorders Are Not.* There are many current erroneous views, physical and psychological, as to the nature of functional nervous disorders. The physical concepts include the theories of intoxication and exhaustion, as a result of fundamental exhaustion of the ner-

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vous system, overwork, toxemia from autointoxication and focal infection, endocrine disorder, minor reflex local disorders of the gastrointestinal system (especially visceroptosis and nephroptosis), local gynecological or urinary tract conditions, eye, ear, nose and throat disorders (especially minor variations in visual acuity, nasal spurs, septum deviations), and such general conditions as hyperthyroidism and tuberculosis. The false psychological theories include the concepts of perverseness, simulation, imaginary disease (which is hypochondriasis), lack of will power and non-existence (as in Christian Science).

None of these explanations is correct.

What, then, are functional nervous disorders?

*Nature and Definition.* A functional nervous disorder or neurosis or psychoneurosis is a nervous disorder in which no specific pathological physical lesion exists; not merely one in which no pathological macroscopic or microscopic lesion is discoverable or has yet been found, but in which it actually is not present. This does not mean that there are no physiological organic or physical changes; it merely excludes pathological organic and metabolic changes, structural and chemical. For example, when we see an object, changes occur in the brain and retina, but they are of physiological and not pathological nature. And so, too, although organic and metabolic changes occur in all sorts of bodily activity, they are within the range of normal and not classified as pathologically organic.

Functional nervous disorders have well been defined as including all those persistent symptoms and troubles of which neuropaths complain and which have been created in these patients without any antecedent somatic lesion of the body.

Functional nervous disorders have been compared,<sup>1</sup> in the field of mechanics, to jamming or blocking which prevents free and satisfactory activity of mind and body. For instance, if a wheel turning on its bearings is prevented from moving freely because the bearings are too tight, we need but loosen the bearings and all is well. This may well be called a functional disturbance of the wheel. But if the axle or bearings be broken, this is organic. And so, if your heart or stomach misbehave, but not due to degeneration or inflammation or drugs or any of the

usual physical disorders, then the condition is essentially and primarily functional. Such unsatisfactory or perverted working or functioning may affect one or more organs. But although not of pathological, organic origin, this does not mean that the symptoms present in functional nervous disorders are not as real, important and disturbing as any symptoms of such origin.

What, then, is their origin, and how can this occur?

*The Origin and Development of Functional Nervous Manifestations.* They are of mental, psychological, or, more specifically, emotional origin. Emotion may be acute and intense, or less pronounced but oft repeated. An emotional reaction, such as fear, consists of three groups of manifestations: 1. nervous and mental, which are felt in consciousness; 2. somatic or skeletal (such as tremors, weakness of limbs, etc.); and 3. visceral or vegetative (disturbed heart action and breathing, vasomotor changes responsible for fainting, pallor, blushing, blood pressure changes, secretory changes—sweating, salivary and gastric secretion, etc.) Both 2 and 3 are peripheral and objective in contrast with 1 which is central and subjective. Emotion shakes the body as well as the mind. These reactions have been enumerated by many writers, especially Darwin, Sherrington, Pavlov, Crile, Cannon, and many psychopathologists. It is not the objective reality of the peripheral or bodily reactions which we deny but rather the belief in their peripheral origin. So pronounced are the peripheral symptoms in some cases that such patients have been called false gastropaths, cardiacs, pulmonaires, etc.

Emotionalism varies with the constitutional makeup, education and training, the individual's experiences and attitudes, the loss of self-confidence and feeling of physical insecurity and moral uncertainty, while such physical conditions as fatigue, overwork, exhaustion and organic disease predispose to it.

Being due to emotionalism, functional nervous symptoms vary with the moral condition, are improved by improved life situations and stimulating emotions, and increased by disturbing and depressing emotions; are improved by distraction of the patient's attention from his functional symptoms or organs to other interests; recur or are made worse by self-absorption, self-observation, morbid introspection and fixation of the

attention; the symptoms are illogical when compared with those in organic disease; autosuggestion plays a great role, and, as a rule, there are too many symptoms.

Emotion may, in truth, act on the organism like an infection or an intoxication and even initiate many organic disorders. In functional nervous disorders the mental disturbance is primary and antecedent, and the peripheral manifestations are consecutive or secondary. Although the origin is psychic, the bodily changes are the same as those occurring in ordinary physiological activity, as in vigorous exercise. Functional manifestations thus represent all psychic actions on the bodily organs and include all disturbances of psychic origin which affect the functions. This distinguishes such patients from imaginary invalids or hypochondriacs whose symptoms are purely subjective and have no objective foundation or organic reality. Hence any neuropathic disturbance in an organ without pathological organic changes in the organ is functional.

The primary psychological origin of such conditions is proven by the fact that they can be produced and relieved by mental influences.

All functional disorders are curable by psychological means primarily and physical and medicinal measures secondarily, while organic disorders are curable by physical and medicinal measures primarily.

*Mental Conflicts the Cause of the Emotional Reaction.* To say that a condition is of mental origin does not necessarily mean that it is due to unusual mental strains, shocks or depressing influences, although such may be the case, but rather to such states which are unusual or excessive for the particular individual with his constitutional makeup (determined by his inherited predispositions and acquired defects), in short to maladjustment or maladaptation, inefficient ways of handling certain situations. This depends on inner mental conflicts, with disharmony between and conflict of purposes, wishes, desires, impulses, with failure of proper mental adjustment. This conflict may be centered not merely about sex (Freud), will-to-power (Adler), psychological types of functioning (Jung), or criminal impulses (Stekel), but about any of the ordinary human desires, wishes and instincts, such as anxieties and fears, balked, frustrated wishes, ideals and ambitions of a personal, business or

social nature, sorrows and disappointments, illness, occupational malplacement, domestic discord, deaths in the family and a host of others. The pressure or battle of life has become too great, the mental tension has become too intense, and the individual is unable to meet the demands of his life efficiently. Gradually the disturbing emotional reactions come more and more easily, almost reflexly, in response to transient, recurrent thoughts of a painful, depressing nature, become organized into what have been called conditioned reflexes, and dominate the life of the patient.

The manner in which the patient solves his problem produces one or the other type of psychoneurosis.

*Classification of Clinical Types of Psychoneuroses.* Although many different classifications are offered by different writers, for the purposes of this discussion I shall divide functional nervous disorders into three main clinical types: 1. anxiety neurosis or neurasthenia; 2. hysteria; 3. compulsion or obsessional neurosis. The same individual may have more than one of these disorders.

*Anxiety Neurosis (or Neurasthenia.* The term "neurasthenia" is used so loosely that it should be replaced by "anxiety neurosis." This is meeting life's problems by positive but excessive emotional reaction, the symptoms leading to inefficiency but the person continuing his duties as best he can. It is the result of a persistent, prolonged, but ineffectual emotional struggle of adjustment to a difficult situation or situations in life. A necessary preliminary to anxiety neurosis is preoccupation, be it concerning one's health, life or future, until the individual feels himself a burden to his family or his business in danger, or anxiety manifests itself in other ways. Weakening of the intellectual control predisposes to anxiety neurosis and may occur as a result of intense, sudden emotion or shock; or in a personality characterized by constitutional restlessness and emotionalism, too introverted, uninhibited, without religious, moral, philosophic or practical direction, taken by surprise; or in those vanquished in life's struggles, with partial loss of self-control but still battling to recover equilibrium.

Any symptom which first makes its appearance at the time of the depressing emotion is speci-



ally liable to become a functional nervous manifestation. Repetition of the emotion leads to recurrence of the symptoms. There is lack of a general direction or life plan; the patient is without a guide, leader or director, whether of conscience, religious, or philosophic idea, ambition, ideal or goal, and lacks, because he never had or has lost, moral support and orientation, and is as a child to his parents or a soldier to his chief. His lack of self-control is shown by his irritability, emotionalism, impulsiveness, explosiveness, with rapid responses, hesitations in decisions, scruples, pre-occupations, and consciousness of same, leading to feelings of insecurity, incompleteness, anxiety, helplessness, insufficiency, inefficiency, inferiority, inadequacy, failure and pessimism. Lack of direction and aim in life produces a disoriented or dislocated personality.

The symptoms are general and local, and comprise the manifestations generally enumerated under descriptions of neurasthenia—fatigue, loss of weight, disturbances of the alimentary system (anorexia, indigestion, etc.), urinary complaints (especially frequent urination or polyuria), genital disorders (impotence, nocturnal emissions, vaginismus, and the like), circulatory phenomena (such as tachycardia, cardiac discomfort, palpitation, feelings of constriction in the chest, subjective feelings of irregular heart), vasomotor discomforts (such as pallor or blushing, coldness and sweating), respiratory difficulties (especially sighing breathing and shortness of breath on slight exertion), and especially nervous and mental annoyances (from ocular and aural symptoms to giddiness, scalp paresthesias, insomnia, inability to concentrate, poor memory from inattention, fear of insanity and sudden death by apoplexy or otherwise, shyness and awkwardness, feelings of inferiority and self-depreciation, anxieties and phobias, discouragement, indecision, self-pity, tendency to cry on slight provocation, and many others.)

All these symptoms are due to three main causes: 1. disturbed (increase, decrease or abnormality in) action or functioning of one or more organs or systems, due to emotionalism and suggestion; 2. self-observation and consciousness of normal physiological functioning; and 3. fatigue from emotion, anorexia, insomnia and irregular habits.

*Hysteria.* This is characterized by meeting

the difficulties of life by negative emotionalism,<sup>2</sup> insufficient or no response, the resulting symptoms preventing the continuation of life's duties, as in the case of paraplegia. The patient is fully and completely out of life's fight and free from all responsibilities, with an unrecognized and unappreciated desire not to return to duty or fear of doing so. It is generally due to emotional shock or great emotion. Hysterical patients are emotional but not obsessionable or preoccupied. There is a lack of interest in certain functions or organs, in sharp contrast with anxiety neurosis. The hysteric has given up the fight, the symptoms are particularly disabling physically, especially in the limbs, while the mental state is one of calmness and even satisfaction, whereas the anxiety neurotic is still fighting hard to stay in the game of life, his physical symptoms are mainly visceral, and mentally he is excited, worried and fearful about his physical and mental condition. There is in hysteria loss of function resulting from the dissociating action of emotion, aided by suggestion and imitation, the clinical type of symptoms depending on ideas or mental representations and not on anatomy, and include not only the hysterical crises which are the least specific thing in hysteria and are merely emotional discharges, but also and more significant, the prolonged post-emotional manifestations, such as amnesias, somnambulism, trances, paralyses, anesthetics, fugues, and the usual findings described in the text-book presentations of this disorder. The diagnosis is made by the absence of true organic disease of the type suspected, a careful sequential history, and the results of and kind of treatment.

*Compulsion or Obsessional Neurosis.* This is frequently called psychasthenia. It is characterized by efforts to avoid or ignore certain life difficulties, or to pretend that they are absent. The symptoms are obsessions and compulsions in thought, feeling or action. The patient is dominated by a thought, feeling or action, knows it is absurd, cannot control it, and does not know the cause. Generally the manifestations are highly extended phobias, but they continue to afflict the patient in the presence of other persons as well as in their absence, while ordinary phobias of anxiety neurosis disappear in the presence of another person. Examples are: fear of open or closed spaces, the compulsion to get out

of bed repeatedly to make sure that the gas has been turned off, the fear of church towers, bells and similar objects, fear of contamination, fear of committing a crime. Argument is of no value in the treatment of these fears and compulsions since they are symbols for other mental conflicts and means of avoidance of unpleasant memories and conditions of which the individual is no longer aware. For example, fear of bells may be due to forgotten memories of painful scenes which took place in a church while the bell in the church tower was ringing. These patients too frequently have a feeling of superiority and are very difficult to handle unless their full confidence has been gained.

*General Management.* To treat the peripheral symptoms only is palliative but not causative therapy. To treat the mental condition only is causative but not palliative therapy. But to treat both the mental and physical condition, the former as primary and the latter as secondary, is all-inclusive. Physiotherapy, general hygiene, hydrotherapy, massage, pharmacotherapy, diet, rest, and other physical measures vary with the case, are frequently necessary palliative measures to relieve disturbing peripheral complaints, but should always definitely be regarded as secondary and accessory and not fundamental.

The functional neurotic patient has lost or never had faith, hope and confidence in himself, and it is the physician's first and primary duty to restore or give them to him. You must arouse the patient's faith in something—another person (yourself), a therapeutic or other procedure, or, best of all, himself. To begin with, the physician must gain the patient's full confidence, faith, trust and respect, and then help the patient to acquire or regain these same feelings in and toward himself. To do this, he must become confidential, and you must be interested in and know his full life story—his likes and dislikes, religion, philosophy, habits. You must help him to overcome his feelings of insufficiency or incompetency, of insecurity and incompleteness, of inferiority and self-depreciation, of anxiety and fear, his pathological convictions, errors of interpretation and apprehension, especially his general conviction of helplessness with the habit of morbid introspection, self-observation and constant search for symptoms and their magnification. In their place must come a feeling of in-

telligent security regarding his condition, with self-confidence and poise.

How is this to be brought about? Although indirect suggestion with medical tricks and direct suggestion by hypnosis and autosuggestion occasionally have their place, explanation, persuasion and analysis are the foundation stones of the treatment. For this, no mysterious technic is necessary but merely the ordinary, conversational attitude, familiarly talking things over confidentially in heart-to-heart discussions, appealing to the patient's reason and not conflicting with his convictions and feelings. Expect the patient to reflect and understand and not just accept his errors, faults of character, his nervous and mental condition, his wrong reasoning and interpretation, the genesis and evolution of his condition.

The technic of the examination and treatment of a patient with functional nervous disorder is of the utmost importance and varies somewhat with the type of case.

Where the physician sees a fully developed anxiety neurosis for the first time, his plan of procedure should be approximately as follows: As very much depends upon the very first interview, you must at once gain the patient's confidence by kindly treatment, interest and patience. Let the patient give a complete history of his complaints. Do not hurry him. Take several hours and more, a number of visits, if required, for this purpose. Then cross-examine him in detail about each bodily system to make sure he has not omitted anything. Then summarize the complaints for him. Then, confining yourself to the present attack, get a careful, sequential history of the conditions of origin at the onset, its date, and its development since then, with special attention to the setting under which it began, especially in relation to emotion and suggestion. Get the patient's ideas of the cause of the present attack. As soon as you suspect that the patient is a psychoneurotic, search for a possible relation between the symptom or symptoms complained of and some moral or emotional problem or problems. This may require several interviews. Ask about anxieties, but do not force him to tell of them for it is best that he speak of them willingly and spontaneously later.

Next ask about previous attacks and the patient's ideas about them; and then go in out-



line over the patient's whole life history. The rest of the treatment will help to fill in the gaps in the history.

No third person should be present at any time, except a nurse when making a physical examination of a patient of the opposite sex.

Then comes the physical examination, which must be absolutely thorough and the most complete he has ever had. If in the least doubt as to the presence of physical disease, withhold your final opinion until all the evidence, including laboratory work and opinion of consultants, is in and weighed. Then give your opinion. Once your final opinion is given, make no more re-examinations.

Tell the patient the truth. Do not conceal from him the existence of any physical defects found but of no causative relationship. Tell him if they are of any importance or not, and why. Explain fully the difference between organic and functional disorders. If no physical disorder of any sort is present, or, if any be present but not related to the condition, tell it definitely and positively. But do not tell him, as many physicians do, that there is nothing the matter with him, that his complaints are imaginary, that he should forget it, and least of all should you hint at simulation as the explanation. Assure the patient of certain recovery if he will cooperate, and give an estimate of the approximate duration in weeks or months. The patient must accept the fact that his condition is not due primarily to physical disease. He must be convinced that he can be cured, he must wish to get well, and he must be willing to exert his best efforts in co-operation. Give no vague or dangerous hints about possible physical disease. In fact, be careful of what you say, for he will remember everything said about his condition and health.

The patient may at first ignore, neglect or even hide emotional factors, or fail to appreciate their relationship to his present condition. If handled properly, he will voluntarily tell all about his emotional conflicts and anxieties. Hardest of all for him to confess are emotional causes related to the sense of guilt or to his sex life.

He must be made to see the following: the symptoms started originally as an emotional reaction which was repeated till it became habitual, and then the peripheral accompaniments of

the emotion were misinterpreted as evidence of organic disease; self-observation, suggestion, anxiety and fear concerning the latter phenomena produced further emotionalism and the latter again produced peripheral symptoms — a vicious cycle was the end-result, until, finally, the original anxieties and emotional conflicts about personal, business or social problems were displaced, forgotten or not recognized as in any way related to his complaints, and the latter became the centre of his interest and concern. And when the patient accepts and believes in this explanation, as a result of understanding, then he is on the road to recovery. A preliminary period of argument, questioning and uncertainty is to be expected and really preferred before the patient agrees to the explanation. You can then explain to him the variability of his symptoms through the agency of distraction, self-observation and emotional preoccupation.

The act of confession helps to relieve the patient of the great mental tension under which he labored, and when he believes in the psychological and not physical origin of his trouble, the way has been prepared for the next step.

He must now find an object in life so that he will be reoriented and redirected. If he has any feelings of remorse, scruple, self-reproach, regret and the like, a new philosophic outlook must be built up. By understanding his patient's previous personality and life, the physician can guide him according to the patient's ability and needs and not according to his (the physician's) own conception of life. At this stage he is not the moralist. His only object is reconstruction and re-direction of the patient's personality even with its defects and moral inferiorities. Only when the patient is cured should the physician consider altering the former's viewpoints by assuming the role of moralist. After all, most psychoneurotics are too serious, overconscientious, with excessive scruples and sentimentality. Now the physician's function is that of consoler, comforter, the giver of hope, the director and organizer of a possible new life, and as lay confessor and moral director he understands and absolves everything. The anxiety neurotic should not go on with his emotional struggles but forget his situation and condition and go forward with new plans and reorganization of his life. The late Dejerine truly stated that real cure means to

have the patient liberated morally, regain confidence in himself, to be free from functional symptoms, and to have his mental foundations or psychological constitution reorganized to prevent recurrence.

If the state of anxiety neurosis is in its incipency and develops on the basis of some transient physical disorder, if the patient is wisely guided, it is of brief duration.

When a patient complains of illness for which the physician cannot find an adequate physical cause, he should not only resort to all possible laboratory help indicated in the case, but should also think of mental factors as possibly causative. Under no circumstances give any fear-arousing, vague suggestions about increased blood pressure, weak lungs, slight heart murmur, congestion of the brain, or what not, for often this is responsible for the fixation of a psychoneurosis.

In the treatment of the individual symptoms, avoid physical and medicinal measures as much as possible, although symptomatic, palliative treatment is generally required temporarily in the early stage of treatment, but it should be explained that they are temporary aids and nothing more than secondary. If you use physical measures only he will believe that organic disease is present.

In severe cases, with much fatigue, especially if anorexia and insomnia have produced a secondary fatigue state with loss of weight, a rest period, preferably in bed, for one, two or three weeks as a rule, at home, in a hospital or nursing home, preferably in a hospital, is indicated. In this period the patient should have his condition explained to him repeatedly so that he unquestionably understands and believes. He is not to be visited by relatives at first, can have books, newspapers and magazines, a regular and plentiful diet, and massage daily while in bed. In other cases bed rest and isolation of any degree are not necessary. The individual symptoms, such as dyspepsia, are handled in turn and fully explained to the patient. Many of them, such as insomnia and air-swallowing, require special methods of treatment which cannot be included in this paper.

After he has been feeling well for one or two weeks, the patient should be sent back to his regular environment and then to work, at first part time and then full time. When in doubt, it is better to have the patient return sooner rather

than encourage idleness. Let him know that symptoms may recur, but he must learn to understand, explain and prevent them by preventing depressing emotions by the cultivation of a philosophy of life, hobbies, and a variety of interests.

The degree and duration of temporary reduction in activities varies with the individual cases. In some it is not necessary to stop work at all.

In the case of patients with persistent, residual symptoms, consider the possibility on the former's part to retain them for one or more of several possible reasons: the desire not to return home (because of disagreeable conditions there) or to work or other responsibilities and problems; or an impossible standard of health (perfection) has been set up with resulting hypochondriacal self-observation; as a rule the reason is misinterpretation of physical manifestations of an emotional reaction or magnification of trivial symptoms.

Phobias are best treated by finding the origin, if possible, by tracing them back to their ultimate beginning, even, occasionally, to childhood, and then explaining them to the patient, with suggestions as to ways and means to overcome them.

Ups and downs are to be expected and can be traced to anxieties.

For those who improve and relapse and those in whom the emotional origin cannot otherwise be found, the free association method, which was introduced by Freud, assisted by the study of dreams in certain cases, will be found helpful in unearthing apparently buried memories and complexes. In other instances the patient has not fully understood and accepted the psychological origin of his trouble, or has not adjusted satisfactorily to certain recurrent or ever-present, real or imaginary life tasks.

In treating hysterical symptoms, we employ isolation and reeducation with rewards and punishments in degree of isolation and privileges granted, but without intimidation, in addition to analysis, confession, explanation and persuasion, as well as suggestion (including hypnosis). As hysterical patients are characterized by lack of interest in certain functions or organs, with actual belief in loss of function, explain to the patient that you regard his symptoms as real and not due to simulation.

Where the causes at the basis of some of these disorders cannot be removed, a sensible working philosophy of life must be developed. All other



aids must be sought, such as religion, companionship, new interests, etc., varying with the case.

Compulsion neurosis demands a very careful and prolonged psychological analysis and personality study, with explanation, suggestion and reorganization of the personality.

It is plain that purely suggestive psychotherapy is merely superficial and palliative rather than radical and etiologic.

Finally we may, with Dejerine,<sup>3</sup> enumerate as the four cardinal principles of psychotherapy of the psychoneuroses, the general psychotherapy of the moral condition, the psychotherapy of the psychic fixations by reeducation and distraction, the improvement of the general condition whenever indicated, and the psychotherapy of disturbances due to habit by voluntary or auto-reeducation.

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31 North State Street.

#### DISCUSSION

Dr. W. M. Crosier, Alexis: I feel I am not competent to discuss this paper by this distinguished essayist because my whole training along the line of psychiatry and my subsequent opportunities for observation of such cases has been extremely limited. I think that I, together with the majority of the medical students of my day, were so hopelessly puzzled by the subject that we were convinced we would go crazy trying to master it and thought our professor was certainly crazy or he would not be able to teach it.

I think many of the difficulties that we have encountered, and errors that we have committed in these cases, were due to too hasty and incorrect diagnoses. I think the essayist conveyed the idea that we should not neglect any diagnostic procedure that would lead us to a correct appreciation of the nature of the case. It is highly important to know to a certainty whether we are dealing with a case which is fundamentally one of mental origin or whether we are dealing with an obscure focal infection or something of that kind.

As Doctor Solomon states, organic disease and the psycho-neuroses may occur in the same individual. A proper evaluation with respect to the case can only be arrived at through careful and intensive study. It is extremely humiliating to diagnose a pure neurosis and learn afterward that we have been dealing perhaps with tuberculosis or an undiagnosed aneurism or a late encephalitis or infected tonsils or obscure carcinoma.

My plea would be for a more intensive study of

the cases. This may require a great deal of time. It is agreed that these cases are due to the failure of the individual to harmonize with his environment and this may be partially due to the effect of hereditary influence upon the germ-plasm.

Our efforts in these cases should not be confined exclusively to the cure of cases which are already developed but we should make an effort to limit the number of cases in future generations. The study of heredity should be encouraged. The education of people in the principles of eugenics should be taken up. The habit training of the growing child is important. The rearing of the child in a healthy minded atmosphere free from emotional and psychological disorder is important. Efforts in vocational direction would have a place later in life.

I enjoyed this paper but I do not feel capable of discussing it further.

Dr. Charles L. Mix, Chicago: I would like to compliment Dr. Solomon on his paper, which has much of truth in it. In fact there is nothing stated that I can recognize that is not gospel truth.

There is a practical side to the question, however, which I think is worth having in mind; and that is, that after all it is the sympathetic nervous system which is thrown out of commission in these mental upsets. Every symptom depends upon a disturbance of the emotional center.

I have thought about this matter a great deal. I have some theories which have not been demonstrated by anatomists. I believe we have an emotional center. A good many physicians will say that we no more have an emotional center than a mind center. Yet there is a location in the brain which has not been thoroughly investigated,—the regio subthalamica. Emotional centers are undoubtedly situated in the optic thalami. And beneath it lies this *terra incognita*, the regio subthalamica. In experimenting upon a decerebrate pigeon it is extremely interesting to note that acupuncture in the regio subthalamica causes an erection of the feathers. In other words, there must be some relationship between the sympathetic nervous system of the pigeon which gives this reflex cutaneous response of erection of the feathers and this center. Moreover, there must be a downward pathway which I believe to lie in the columns of Goll and Burdach. Cervical pressure here will produce a contracted pupil, which is merely a sympathetic nervous system symptom. This would indicate to me that the proper place for anatomists to look for such a tract would be in the columns of Goll and Burdach. This hypothetical tract in here must form the ganglia of the sympathetic nervous system.

Now, the emotions which cause these results are disagreeable emotions. They are anger, fear, hatred, jealousy, and wrath. When these emotions dominate this center they frequently give rise to impulses which go down the columns of Goll and Burdach to the sympathetic nervous system. From the latter proceed perverted efferent impulses, causing overproduction of gastric juice for example, or spasm of unstriated muscle fiber, as seen in cardiospasm, pyloro-

spasm and spastic colitis. One even finds unstripped muscle fiber spasm in the bladder itself. A man I saw yesterday got up twelve times the night before to urinate and he has not a trace of pus or any abnormality in his urine; yet he has to get up every hour and pass 10 or 15 c.c. because he has an irritable bladder. A woman has dysmenorrhea for the same reason. There is a contraction of unstripped muscle fiber. All of these things are things that are due to disturbance of the emotions.

Now, as Dr. Solomon says, when you get such a case you can at once recognize it. You listen to the story. Let the patient unbosom himself of every fact he wishes. Get his confidence. You can gain the confidence of a woman by interrupting her and telling her she might have certain symptoms, such as dysmenorrhea, and she usually will at once assent. These unstripped muscle spasms are all under the control of the emotions. When the emotional center is upset, it does not matter by what, the disturbance of unstripped muscle fiber follows. The whole thing resolves itself into a disturbance of the sympathetic nervous system.

Flashes of hot and waves of cold are again manifestations of the lack of balance of efferent impulses from the sympathetic nervous system.

To dominate these individuals, as the Doctor says, you should engage in conversation with them. Get acquainted with the patients. Tell them to come again. Talk to them. Reason with them. Educate them. Get them to understand the thing as you understand it; and they will understand it as you understand it after a bit of time. When they do, of course you have them converted to your way of thinking and you have them on a rational basis of living.

At times, it is true, there is more than the mere sympathetic upset. You may find, for instance, blood in the mucous colitis discharge. You may find that trophic disturbances are present. Such patients may have to be sometimes helped by drugs. You may have to give an astringent. You may have to give an antiseptic for the bowel. You may have to regulate the diet.

The disturbances of speech which take place are really disturbances of the sympathetic nervous system. The embarrassment, for instance, one feels in getting up before an audience and talking, the inability to get the words instantaneously are all due to the emotional effect upon our sensory nervous system through the sympathetic nervous system.

The main thing is to get in mind the fact that individuals may have emotional conflicts or irritants. These cases are not mental. They cannot be cured by imagination. They can be cured only by correction of the emotional state. They cannot be cured by Christian Science except in so far as by giving them something else to think about, you may divert their minds from their emotional upsets. When that stage is brought about the individual gets well, and it is for us to bring it about.

Dr. Meyer Solomon, Chicago, (closing): It is a very happy thing to hear men like Dr. Mix speak that way.

At the last meeting of the A. M. A. they had a symposium on this subject, showing that the general medical men are taking an increasing interest in this field and beginning to get a grip on it in a very definite fashion, so that when patients under their care are found to be suffering from these conditions fewer of them are inclined to say: "There is nothing the matter with you."

This seems to the patient a very strange thing for the doctor to say. The psychoneurotic may have headaches, and insomnia, and loss of weight, and many other complaints. Careful physical examination, including laboratory work, which it is understood is to be made in all these cases, as indicated, shows there is no definite, organic cause present. Very often when the doctor finishes the physical examination, he says: "There is nothing the matter with you. Forget it." The patient has been battling with his condition for weeks or months or years. And to tell a patient who has a large number of symptoms and who may have been disabled for a long time, that there is nothing wrong with him, is convincing proof to him that the physician does not understand him or his condition. And if he finally goes to some health cult or ism, you can't blame him.

When you suspect a condition of this sort and have positively ruled out organic causes, you must then buckle down and get the patient's history and story; and right then and there you become a slightly different physician than you have been hitherto. You become a friend and protector and guide of the individual and you discuss with him his most intimate problems.

I think that this problem has been made much too complex. It is not necessary in all of these cases to probe for some hidden factors way back in infancy and to spend weeks or months on history taking in each case. In the average instance, your patient, if you can get him to be confidential or friendly enough, will often at the first visit or within the first few visits present you with facts of which he was aware, the casual relationship of which to his illness he did or did not know, or personal problems which he was trying to hide or did not care to discuss with anybody. In other cases, the causes are more deeply hidden and a more careful and prolonged study is necessary.

Dr. Mix believes that emotions always disturb and the symptoms are dependent upon the sympathetic nervous system. I presume that Dr. Mix really meant the entire vegetative nervous system rather than the sympathetic alone. I am not convinced that the skeletal phenomena are due to disturbances of the vegetative nervous system. Nor am I convinced that we have an emotional centre. In emotions, we may have physiological upheaval in the entire organism—the somatic and visceral levels as well as the psychological level.



## RADIOLOGICAL STUDY OF PATHOLOGICAL GALL BLADDER\*

P. B. GOODWIN, M.D.

PEORIA, ILLINOIS

This paper which I am to present does not contain anything more than we all possibly have heard of; but if I do nothing more than impress upon my colleagues who are doing internal medicine, the value of the study of the gall bladder before their patients are subjected to gall bladder or other abdominal surgery, it will have achieved its purpose; symptoms in upper quadrant, maybe lower quadrant, pathology, and vice versa.

It will not harm any of us to review a little pathology regarding the inflammation of the gall bladder. This may be due to an extension of cholangitis or an irritation of retained bile or calculi. It is a fairly common sequel of typhoid fever. In a subacute or chronic cholecystitis, there is a mild hypertrophic catarrh; this, in turn, allows the bacteria to become more securely fixed, the epithelium is often loosened or set free, mixed with mucus, and forms a nucleus for gall stones. The walls become thickened, and mucous membrane swollen.

The position of the gall bladder sac favors retention, hence, an involvement of the serous coat which may lead to adhesions to adjacent organs. Where there is a long non-suppurative cholecystitis, the result is either distention by blocking the outlet, retention of its contents, or atrophic fibrosing of the walls.

Gall stones are concretions resulting from inspissation of bile or the deposits of various substances from the bile and are formed most frequently in the gall bladder, but may be in the bile ducts.

The causes are imperfectly understood, but some of the most important factors are advanced age, female sex, sedentary habits, and high living.

The inflammatory condition causes obstruction or retardation of the bile flow, with desquamation of epithelium; mixed with mucus this serves to form nuclei for stones.

There may be an alteration of the bile which causes a precipitation of some of its constituents, such as cholesterol.

Bacteria play an important part by clumping, to form a nucleus; of those the typhoid and colon bacilli are the most important.

There have been numerous classifications of gall stones, but those which interest us most are cholesterol and calcium type.

With the above factors in mind, we understand why Dr. George of Boston made the statement that a gall bladder, the shadow of which could be seen on an x-ray film was pathological. Today some do not consider this true. However, it is remarkable how the diagnosis of a pathological gall bladder is being so frequently substantiated at the operating table, after a careful and proper Roentgen study; and with an advance in the past few years, the percentage of accuracy has increased.

Prejudice, jealousy, and honest disbelief have all stood in the way of x-ray diagnosis. One great fault has been and still is, that all x-ray work is not all of the same standard of excellence. Investing in an x-ray machine, which takes up one corner of the office, sold by a high-pressure salesman, with a technician at the button, with often undiagnostic film, and interpretation made by one of very little experience, spells failure, and in turn is often blamed on the x-ray.

If you physicians expect to make a diagnosis of pathological gall bladder by the assistance of Roentgen ray under those circumstances, it cannot be done; if you will only consider the difficulty that the radiologist often finds he is up against in these studies, how do you expect to get the most value out of it? It is not fair to you, to your patient, or to the x-ray.

The radiologist is often expected to render a positive diagnosis from his Roentgen examination; this is not fair, and should not be expected in all cases, for it will not advance the art of radiology or medicine. The Roentgen ray is only a method used to arrive at a correct diagnosis. However, it is often a final factor; many times our consultants are influenced by it, not taking into consideration other signs and symptoms.

It is not an easy task to convince our surgeons and internists that we can produce the shadows of a gall bladder on a film. Perhaps they all came from Missouri!

The radiologist who is interested in his work, does careful progressive study, and uses a correct technique can show them. We are not at-

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tempting to show gall stones only. If we were, we would fail; but we are trying to demonstrate the pathological gall bladder—with or without stone—by the direct and indirect signs.

The question of gall stones is of small account for we all know that stones with small amount of calcium do not have as much density sometimes, as the bile in which they are; yet, a mass of small stones will sometimes produce a visible shadow. Considering that gall stones are composed in large part of cholesterin and small part mineral matter is against the radiologist in their detection; while the opposite, the kidney stone containing a large percentage of calcium salts is rather easily demonstrated. Occasionally old, calcified stone will show a very dense shadow, sometimes single, but often multiple, and often have to be differentiated from kidney stones. Most frequently the stones will show a very faint ring-like or disk-shaped density; if multiple, they often outline the gall bladder. If numerous and presumably filling the entire gall bladder, their total outline should correspond to the outline of that organ; and if only shown on two films of a series, even if brought out only by varying the view light or angle, the experienced radiologist does not hesitate to interpret those shadows definitely and positively gall stones.

Again the gall stone shadow may be single or multiple areas of decreased density, almost resembling minute gas bubbles; their size, group relationship, and contour may be identified as gall stones; even if we fail to find these densities, nevertheless, there may be gall stones.

Stones are not so important as is cholecystitis, which necessitates surgery. Infection is the primary condition, and stones the secondary. A complete gastro-intestinal examination should be made in all obscure abdominal conditions and suspected cases of gall bladder disease. Every case is a new problem; it has its variations from the normal, and often leads us to mistaken diagnosis.

All cases submitted to us for gastro-intestinal study are considered potentially gall bladder cases, and are properly prepared for such study—except those undergoing a special gall bladder examination. Unless one adheres to his own routine method of examination, many cases are overlooked. If after a careful gastro-intestinal study, the patient is considered to be a gall blad-

der case, we further study the case by the newer method of Graham, which will be described later; after this, and only then, are we in position to consult with the internist or the surgeon.

We have been questioned in regard to the use of x-ray in the diagnosis of gall bladder disease; but if we only follow such men as George, Leonard, Kirklin, and Arens—and many others—it should appear clear, or else we are all on the wrong track. With addition of the Graham dye method, we have still another link added to our chain of evidence.

The only way one may check himself is to follow those that come to the operating table; furthermore, some surgeons will examine the gall bladder by palpation, and because it is easily compressible, empties, contains no stones, has no enlarged glands or adhesions, they report normal gall bladder. We radiologists have taken this as definite and checked ourselves; whereas, if we had a pathological report, we would often be more positive.

You may ask: "Why should not a normal gall bladder show?" We answer, "What do you mean by a normal?" "I am from Missouri, apply here, show me the pathological report.

Adhesions arising from the gall bladder or connected to the gall bladder are due to gall bladder lesion, either past or present; this is agreed practically by all pathologists.

The lymphatic system of the liver is in close relation to the cystic and common ducts as it travels the gastro-hepatic omentum; these structures, in turn, are in close relation to the duodenal bulb or cap and upper part of the second portion of duodenum. Surgeons frequently find evidence of pathology about these ducts or the neck of the gall bladder when fundus appear normal, but on examination of the gall bladder walls, there is evidence of infection.

*Diagnosis*—The diagnosis of pathological gall bladder depends upon physical, laboratory, fluoroscopic and radiographic examination, and the interpretation of such data. It is important to the radiologist to have the evidence of other departments, as for the internist or surgeon to have the radiologist; provided they are broad enough not be misled by one another, and in the final summing up, all of the data be consulted.

There is no doubt at this time of the value of fluoroscopic and radiographic examination.



The other examinations may present evidence of gall bladder disease, and the radiological negative; this does not prove all the other evidence is false, any more than when the internist finds rales in the apex and x-ray shows complete military tuberculosis, that the internist is wrong.

To obtain our evidence we use two different methods:

1. Direct: Plain, Dye.
2. Indirect.

The direct plain evidence means the changes in the gall bladder itself, or shadows of its outline, stone within the shadow. The normal gall bladder, under ordinary conditions, is not visualized.

Any definite shadow, the size, shape, and location of which can readily be shown on two or more films, must be pathological; either enlarged, thickened walls, thickened bile, or stones in gall bladder or ducts. It should be seen as a third shadow between the overlying shadow of the kidney and liver. It may hang almost directly downward, or angled outward to the right as much as 45 degrees; as a rule, only the fundus and outer or lower portions of the wall are seen.

In the interpretation of the plain films there are possibilities of confusion, such as calcified glands—fecaliths—kidney stones, lesions on the skin, moles, warts; certain ointments such as bismuth or zinc preparations, as well as internal medicine, as bismuth.

*Direct Dye Method.* There has been a desire to obtain some method by which we would be able to reveal more information regarding gall bladder pathology. In 1924, Graham, Cole and their co-workers began to use sodium tetrabromophenolphthalein; this chemical or dye was later replaced by sodium tetraiodophenolphthalein, as it could be used in smaller doses and is equally efficient. This was made up in solution and used intravenously; they found it was giving them more information. Later on, others commenced to use this dye orally, so at present both methods have followers. At present, I believe more radiologists are using the oral method. Personally I have used only the oral method for the following reasons:

1. The method is more simple.
2. Patients do not object.
3. It does not require sterilization of skin and instruments.

4. There is no pain or danger of phlebitis, necrosis, sloughing.

5. If necessary, I can give it to patients, with instructions so that they may take it home.

However, the last I do not encourage, as I prefer them in the hospital the night before examination. I do believe, that sometimes, if impossible to get the shadow, and if this is a point upon which the diagnosis rests, I would use it intravenously.

*Indirect Method.* This indirect evidence means the effects produced on surrounding tissue by gall bladder disease, such as flattening or deformity of the duodenal cap, reversed peristalsis in the duodenum, displacement of the stomach to the right, high or low fixation of the hepatic flexure or proximal end of the transverse colon.

The pressure deformity is due to increased internal tension or thickening of the gall bladder, which produces pressure on an adjacent organ. The duodenum is most frequently affected by this pressure, and may be seen on the external surface by a typical curve. If on the superior surface it is seen in a lateral position as a flattening of the cap and is almost pathognomonic of gall bladder disease, although it may be adhesions, which must be excluded. But a clear cut indentation of the duodenal bulb, crescentic formation, usually seen on the lateral aspect of the bulb, is a diagnostic sign (this will be illustrated by slide), although irregularity of bulb, not crescentic in form, with distortion of the descending portion of duodenum course, causing angulation are gall bladder signs. Not only of the duodenum, but often on the antrum of the stomach, if the gall bladder is large, and the hepatic flexure of the colon will present pressure defects which are nearly as decisive as changes in the duodenum.

The normal stomach holds the meal in equal width, the pyloric sphincter closing, preventing the discharge into the intestine, the cardiac sphincter closing to prevent regurgitation, but frequently in gall bladder disease and in direct infections, a narrowing of the pyloric end of the stomach occurs, forming a tube-like appearance; this shows at once on taking a meal, and persists for some time.

The peristaltic waves commence far back in the curvature of the stomach and follow down toward the pyloric, but often fail to reach the

pylorus, so at no time has the antrum of the stomach a globular shape as it should normally have. This spasm of the pylorus causes increased tension in the stomach, which is so often complained of as a fullness; this, in turn, produces a backward pressure, causing belching.

We make use of indirect finding as a help in the interpretation of doubtful demonstration of the gall bladder on film. If there is a contour line in the gall bladder region, it itself is not positive; but, weighing the evidence of the indirect findings, we use in summing up the data: There is usually an early emptying of the stomach following the barium meal. Any spasm of the stomach should cause one to suspect gall bladder disease. Six-hour residue in the stomach or duodenum may be the result of pericholecystic adhesions, as in some cases without any organic obstruction. The localization of the tender point over the duodenal shadow is another small indirect factor.

Adhesions by fixation to adjacent organs cause a deformity in outline. Here the fluoroscope is of the greatest help. The stomach or first portion of the duodenum may be abnormally fixed to the right side. The second portion of the duodenum, which is generally parallel to the long axis of the body, is displaced in different degrees to the right.

The hepatic flexure and proximal end of the transverse colon occasionally show evidence of gall bladder pathology by fixation. The transverse colon may show fingerlike projections pointing upward and inward from its superior surface, thus causing angulation of the colon.

One must not overlook a food-filled antrum of the stomach and interpret it as gall bladder, which it often simulates. This, however, is differentiated by being inconstant, the shape changing by peristaltic wave; if necessary examine the second time on an empty stomach.

**Differential Diagnosis.** Those pathological conditions which must be considered in making a differential diagnosis are:

- Gastric ulcer
- Duodenal ulcer
- Appendicitis with anomalies of formation
- Urinary calculi
- Calcified glands
- Warts, moles, and skin tumors
- Opaque drugs.

#### GASTRIC ULCER

- The niche
- Accessory pocket
- Organic hour glass stomach
- Spasm

- Incisura
- Six-hour retention
- Gastric hypotonus
- Acute fish hook stomach
- Alteration of the peristaltic wave
- Localized tenderness
- Lessened mobility of the stomach.

#### DUODENAL ULCER

- Deformity of the duodenal contour
- Deformity of the basal border
- The niche
- The incisura
- Retention of small mass of barium in the duodenum
- The accessory pocket in perforated ulcer
- Hyperperistalsis, generally four waves at a time.

#### APPENDICITIS

By the inverted cecum appendix filled and demonstrated in gall bladder region.

#### URINARY CALCULI

- Urinary disturbances
- Urine examination
- Outline of kidney
- Steroscopic examination of kidney

Lateral roentgenograms differentiate by position.

Both roentgrams made in the antero-posterior and postero-anterior positions—the greater the distance of stone from film the greater the size of the stone; hence, a film taken in postero-anterior would be smaller than in antero-posterior. Opaque catheters in ureters, with tube shifting for suspicious densities, and finally pyelograms. The gall stone lies outside kidney pelvis. Kidney stones are generally irregular in shape and the density is almost always homogenous. Gall stones are more often multiple than kidney stones.

#### CALCIFIED GLANDS

These are sometimes very difficult to differentiate; they are usually of the mesentery, and are differentiated by their irregular outline and a greater central density.

#### WARTS, MOLES, SKIN TUMORS

These are discovered by examination of the patient's body before the roentgenograms are taken.

**Diagnosis by the Oral Method of Dye.** The sensitiveness of cholecystography in revealing abnormalities of function of the gall bladder is one of its most striking assets in the diagnosis of a slight degree of cholecystitis. The more I use the method, the more I am impressed with its value.

In some instances the gall bladders have been removed on the strength of the radiographic evidence, and later the microscope finds definite signs of inflammation.

Gall stones often produce areas of less density,



doubtless due to taking the place of the dye, but more frequently stones are found on operation which failed to visualize, due to the severe cholecystitis which accompanies them, and fails to allow the dye to enter the gall bladder. Graham and his co-workers report it has proved correct diagnosis of pathological gall bladder by their method in 96 per cent which came to operation. Sosman, Whittaker and Edson of Boston, by the oral method, 95.2 per cent correct. While I still see the value of the dye method, I cannot cast aside the method of Dr. George of Boston, of roentgenogram of the gall bladder before using the dye.

Under this division, I shall take up my method of oral administration and preparation of the patient. One or two days previous to the examination I instruct the patient to take two drams of compound licorice powder at bed time, and follow the next morning with a soap suds enema, with only a liquid breakfast, and to report to the radiological department in the morning, when one or two roentgenograms are taken of the gall bladder. The patient is then instructed to return to the hospital on that evening with only a light evening meal; three hours after this meal he is instructed to go to bed and lie on his right side. Fifteen minutes before starting the dye, the patient is given one-half dram of sodium bicarbonate in one-fourth glass of water. The dye is used in keratin coated capsules of .25 gm. of sodium tetraiodophenolphthalein to each capsule—one capsule to each ten pounds of body weight. These are given two each fifteen minutes with water, until the amount required has been taken. Water is given frequently and I encourage the taking of at least one-fourth of a glass each time. No food or odor of food is allowed to come in contact with the patient. Twelve hours after the first dose, roentgenograms are taken, followed at 16, 18 and 36 hours. After the 16-hour, the patient is given a fat meal consisting of cream, bacon, buttered toast. In an hour following the fat meal another roentgenogram is taken; if gall bladder is empty, we do not proceed any further; if not empty, we continue to ray until empty.

The first film at twelve hours consists of one including the whole abdomen; this for two reasons—first, to note if the dye has been broken up; and second, to see if the gall bladder may be in an abnormal location. All normal gall bladders

will retain enough dye to cast a homogenous shadow 12 hours after it has been taken; its density increases to 16 hours, and then begins to empty; so at the end of 36 hours it should be empty.

The shadow should be oval or pyriform, even in outline, and homogeneous—larger at first, gradually getting smaller. This proves to us three points:

1. The characteristics of the shadow of gall bladder.
  2. The elasticity of the gall bladder.
  3. The concentrating power of the gall bladder.
1. The characteristics are shape, density, outline and location.
  2. The elasticity is noted by the change of size and density after fat food is taken.
  3. The concentrating power of the gall bladder should be good enough so the dye will cast a fairly good shadow.

Under variations from the normal I have classified four types:

1. Failure to fill the gall bladder.
2. Irregularity of outline in a greater or less extent.
3. Lack of evenness of density or mottling of the shadow.
4. Delayed emptying.

TYPE 1: If the gall bladder shadow does not appear at any time, it is due to obstruction which may be either intrinsic or extrinsic. The most common intrinsic causes are stones, stricture of the cystic duct, or swollen mucous membrane. The extrinsic are mostly pressure, such as tumors, adhesions, shrinkage of the gall bladder, or a thick bile preventing entrance of the dye, thickened gall bladder walls, defective liver function. If jaundice is present and no shadow seen, this is probably due to contracted gall bladder. Many other lesions have to be considered, such as malignancy of the liver, chronic pancreatitis. Practically, it can be said that failure to get a good shadow is the result of inflammation, poor liver action, or obstruction.

TYPE 2: The irregularity of outline may be caused by stones, tumor pressure or adhesions.

TYPE 3: Mottling or uneven density are stones or gas in colon. Stones that have radiolucent centers will cause ring or mottling shadows; a small area of gas in colon may super-

impose upon the gall bladder and cause shadows which must be eliminated.

**TYPE 4:** Delayed emptying is caused by thickened walls or adhesions. Reactions to the dye were three: Diarrhea, headache, vomiting. Since I have given sodium bicarbonate, the diarrhea and vomiting have practically been eliminated. The headache in most cases is relieved after taking food. However, neither of these reactions are severe or persistent.

In concluding I wish to insist that in pathological gall bladder study, co-operation with the internist and the surgeon is of great value.

As this is only part in the diagnosis of gall bladder diseases we must take into consideration the facts found by other methods of examination.

#### CONCLUSION

1. That the new method of sodium tetraiodophenolphthalein administration has proven a very important factor in diagnosis of gall bladder disease, and should be carried out routinely.

2. A complete study of the gastro-intestinal tract is nearly as important for indirect signs as the dye is for the direct signs.

3. In the summary we must remember that the clinical side is as important as the radiographic, in the diagnosis of the pathological gall bladder.

#### DISCUSSION

Dr. B. R. Kirklin, Rochester, Minnesota: I want to congratulate Dr. Goodwin for this splendid paper. He has covered the whole method of diagnosis, I think, quite thoroughly. I wish to add my confirmation of some of the things he has stressed and at Dr. Goodwin's request, discuss some of the errors in cholecystography.

I feel, as I have always felt, that the visualized gall bladder without dye is still significant, and that practically one hundred per cent. of these cases will be found at operation to have a diseased gall bladder. Unfortunately a negative diagnosis, that is, failure to visualize the gall bladder on the primary film has very little value in my opinion. I think less than forty per cent. in rather a large series which have been studied have been found to show on the roentgenogram.

There is no question that Graham and his co-workers deserve praise for their contribution to medicine. Personally, I think it is the finest contribution made in the field of roentgenology for several years. It not only offers a good method of diagnosis, but it has stimulated a lot of thoughtful study of the gall bladder, especially its functions.

As we would expect, the results have been rather varied among different observers. Some men claim as high as 100 per cent. efficiency with the method. Others are not so enthusiastic. I am of the opinion

that more harm can be done any method in medicine by over-enthusiasm than by being conservative in our claims. For that reason, I shall spend most of my time in discussing some of the errors in cholecystography as I have observed them.

The physiologists say the gall bladder is a very temperamental organ. Various factors seem to influence its functions, especially its filling and emptying. Another bone of contention is the slightly diseased gall bladder. Any competent pathologist would tell us that in any gall bladder he receives for examination, he can find some microscopic evidence of disease. But I feel there is a point where the microscopic evidence of disease becomes meaningless.

I do not believe we know what constitutes the pathologic gall bladder from a practical standpoint. The physiologists will agree with us. So until a definite basis is established where we can say that a gall bladder is diseased as shown by altered function or morphologic changes, we will not be able definitely to evaluate cholecystography or any other method of gall bladder diagnosis.

There are certain errors in cholecystography that I think are inevitable. First, the errors of the method, which seem to be unavoidable; second, personal errors of interpretation, and third, errors in technic.

In regard to errors in the method, in the first place, we have to determine definitely, the significance of "cholecystitis one" group, in which only microscopic changes are found. Possibly changes are due to old infection that is now inactive. I have seen many gall bladders which gave a normal cholecystographic response, although stones had been previously removed by cholecystostomy; the pathologist frequently reports cholecystitis one with scar at fundus.

Judd reviewed a large series of cases of cholecystitis one. He found that after a five-year period, seventy per cent. of this group were definitely benefited or cured by their operation, while thirty per cent. were not benefited at all. He found the group that was benefited most was the group that gave a typical clinical biliary colic history before operation. Ninety-three per cent. of that particular group reported definite improvement or cure following the operation.

So even though we may argue with the pathologist as to what cholecystitis one is, nevertheless a high percentage get relief and that is the group in which cholecystography, in my opinion, has been of little help because one such case will give a positive response, another a normal response.

Another source of error is the rudimentary gall bladder or the congenitally absent gall bladder. There is no way of evaluating such an invisible gall bladder and such errors are inevitable.

In connection with personal error in differentiating between faintly visible and normal shadows, there is a wide latitude of density in the normal cholecystogram. Dr. Goodwin has brought out the point concerning mottling and the primary gall bladder shadow. It is not our practice to make preliminary films of the gall bladder, although in private practice I think that would be a good plan. If we see a gall bladder shadow of



constant size throughout the series of cholecystograms, films are then made without the dye.

The large gall bladder shadow, I think, is of very little significance especially of the viscus because we know that the gall bladder may be distended during the fasting state. A great many men have stressed the slight deformities of contour. In my experience, slight deformities have had very little, if any, significance.

Lastly, I think the most important thing in avoiding future errors is to follow the patient to the surgical table and pathologic laboratory and check the findings against the roentgenologic findings as we will learn there to avoid several sources of error and will find that we have to be a little cautious.

I do not want to give the wrong impression. I have merely stated the sources of error as I have seen them, but I want you to feel that I am enthusiastic about cholecystography. There is no one more enthusiastic about it. I think it is efficient and should be correct in ninety-five per cent. of the positive cases.

Dr. R. A. Arens, Chicago, Ill.: There is **not very** much I could add to what has already been said. I would like to bring out one point about cholecystography. The interpretation of what constitutes a normal bladder, as I understand it, consists of filling of the gall bladder at a certain period after the administration of the dye, depending on the method used, secondly, the gall bladder should start to concentrate at a certain time, the shadow becoming more dense, and then at a certain time, after a fat meal, gradually empty itself.

A change in shape or size is considered evidence of a normal viscus. The normal bladder should be distensible, and when there is a change in size on filling and an increase in density or concentration followed by a decrease in size as the gall bladder empties, that should constitute a so-called normal gall bladder.

The presence of gall stones, per se, is conceded by most surgeons as evidence of gall-bladder disease. If that is the case, there are hundreds of these gall bladders that have been shown by cholecystography to fill, distend, contract, and empty. There is something to think about. In other words, a gall bladder with stones may show all the normal functional findings of a normal gall bladder by the dye method and yet be pathological when based on this gall bladder containing stones.

Regarding the differential diagnosis of renal calculus and gall-stones, I believe that is something you seldom encounter. Cholecystography will do it in some cases, but in most cases we run up against a situation which makes it almost impossible to differentiate. I think the important thing is the clinical correlation, whether that patient is suffering from gall-bladder disease, or not. The patient may have gall-stones and still not have any symptoms.

I must disagree about the gall bladder seat being present only on the outer curvature of the stomach or duodenum. Case, in a recent article, felt that the gall bladder seat was not found on the lesser curvature of the duodenum, and showed a film where there was an apparent seat on this curvature, a stone in the fundus

being off to one side, thereby apparently proving that the gall bladder could not have produced this seat. However, contrary to this view, it is possible for a gall bladder to make an indentation or so-called seat on any curvature of either the stomach or duodenum, depending entirely upon the relationship of these parts. Likewise, the gall bladder seat is not confined to the greater curvature border of the pyloric antrum.

Dr. Goodwin said he didn't feel tenderness over the gall-bladder was important, because the duodenum may be drawn over to the side. It is true that where the duodenum happens to be pathologically fixed in the gall-bladder area palpation under the fluoroscope will produce simultaneous tenderness over the gall bladder and duodenal areas, because they are one, but this does not happen in the majority of cases.

There is one type of person, the hypostenic type, where the duodenum normally is directed posteriorly and held up against the liver margin. In that type of individual tenderness over the gall-bladder area would invariably be over the duodenum.

However, under the fluoroscopic control where a tender point can be elicited away from the duodenal area and the hepatic flexure under the right costal margin, it can only be due to a tender gall bladder.

I would like to make one more point relative to the determination of shadows in the gall-bladder area. Much has been said about the inability to pick out the gall-bladder shadows as shown on the primary films. We have adopted this method. A shadow is shown on a primary gall-bladder film. Is this or is it not the fundus of the gall-bladder? It may be due to the hepatic flexure, the stomach, or the descending duodenum. After the barium has been administered we turn the patient in the gall bladder position and take another so-called gall bladder film for correlation of the gastro-intestinal structures within the upper right quadrant. We have been able in many instances to avoid falling into error. You will frequently find that the duodenum may simulate, on account of its horizontal position, the fundus of the gall bladder. Often you will find the cap directly over the gall-bladder area.

With this procedure you will either be able to differentiate gall bladder from duodenum or avoid falling into the error of calling the bulb, the un-filled bulbar shadow, a gall bladder. This little precaution has often aided us in determining which of several shadows was duodenum or gall bladder. It is important, however, before taking this latter film, that the gastric cycle is complete and that barium is passing constantly through the pylorus into the duodenum.

Dr. Walter G. Bain, Springfield, Illinois: I want to mention the experience we have had at St. John's Hospital in administering the dye by the intravenous method. We have been using this method in the last 100 cases in our routine study of the gall bladder.

We take a radiograph before we administer the dye, intravenously. After four hours we take another radiograph, and after seven hours we take a third radiograph. Immediately following this third radiograph, we give a fat meal. One hour following the fat meal.

a final raidograph is taken. This examination therefore covers an eight-hour period.

Comparing this method with the results by the oral method, I have been more satisfied, because it shortens the time of observation of the patient and it has given quite as good results as the method of keeping the patient under observation from 24 to 36 hours, which is required by the oral method.

Dr. P. B. Goodwin, Peoria, Ill.: I have nothing particular to say. I wish to thank the gentlemen for discussing the paper, and I would like to ask Dr. Arens one question I didn't quite get. Do you mean you place your patient in the gall-bladder position after giving the barium?

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## FOOD-POISONING\*

LLOYD ARNOLD, M. D.

Department of Bacteriology-Pathology, University of Illinois,  
College of Medicine

CHICAGO

Food-poisoning outbreaks are usually associated with some bacteriological etiological agent. The older term "ptomain poisoning" is rapidly being discarded. The majority of the outbreaks are thought to be due to food-infection caused by members of the Paratyphoid group of bacteria. Botulism will not be discussed in this article. We wish to discuss the question of "food-poisoning" from two standpoints; first, the mechanism involved in the production of the symptom complex called "food-poisoning" and second, why are susceptible bacteria so seldom found in the food examined and in the excreta of the patient.

Robert Koch taught us methods to use in the isolation of bacteria. For the past 45 years these methods have helped us to find specific causative agents for many diseases. The bacteriologist has focused his attention upon these micro-organisms and has studied their cultural reactions, life-cycle, toxin production, etc. Max von Pettenkofer in 1854 advanced the theory that the epidemic gastro-intestinal diseases were caused by the interaction of several factors. The germ in the feces of the patient would not cause an explosive outbreak of an epidemic unless they were deposited upon warm, moist soil. The germ he called the "x" substance, the soil factor he termed "y," both of these together made a "rip-

ened germ" that under some seasonal conditions and certain susceptibility of the population would cause an epidemic of the particular disease. Thirty years later, Koch discovered the cholera bacillus, at the same time Eberth and Gaffky described the typhoid bacillus.

Pettenkofer's theory was discarded and is now referred to in text-books only in a historical way. Pettenkofer, before the days of bacteriology, advanced a theory that was dependent upon certain host susceptibility to bacteria. There is a seasonal period of outbreaks of these gastro-intestinal epidemics; temperature and humidity played a role, but there must be a change in the host to make him particularly susceptible before an epidemic can take place. The enthusiastic pursuit of Koch's methods of investigation disregarded the host, and focused attention only upon the bacterial causative agent of the disease.

We have been working upon problems that involve a study of the bactericidal power of the gastro-intestinal tract.<sup>1, 2, 3, 4</sup> If foreign bacteria, entering this tract are destroyed then the loss of this bacterial killing power could play a major role in the etiology of a gastro-intestinal infectious disease.

We have found that the acidity of the stomach helps to kill bacteria, but many bacteria enter the duodenum from the stomach before there is sufficient acid concentration to kill them or are protected by physical consistency of the gastric contents from the acid substances. These bacteria are killed in the upper part of the small intestine. The intestinal bactericidal power is more efficient than the gastric acidity as a disinfecting agency. This intestinal auto-sterilizing mechanism is to a great extent dependent upon the slightly acid reaction of the contents of this part of the small intestine.

This acidity is dependent upon the proper gastric hydrochloric acid secretion. When all food in the stomach takes up as much bound acid as it can, that is, completely buffered with acid, the alkaline intestinal secretions slowly replace the acid and the contents of the upper half of the small intestine has a slightly acid reaction due to complete saturation of all material with acid in the stomach.

This is the normal condition. We find then

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\*Read before the Section on Public Health and Hygiene, Illinois State Medical Society, Moline, June 1, 1927.



that there is something produced by the mucosa that kills bacteria. When the reaction is alkaline this bacterial killing power is lost.

Many of the outbreaks of food-poisoning are characterized by a short incubation period, two to six hours, and sudden onset of symptoms that point to a gastro-intestinal irritant. The diarrhea, nausea or vomiting and abdominal pains are not accompanied by a systemic intoxication of any magnitude. Recovery takes place in one to two days. It is extremely rare to find pathogenic bacteria in the feces. There are no agglutinins in the recovered patient's serum against the common bacteria that cause food-poisoning. There is no protection conferred against a subsequent attack of food-poisoning. Unless such outbreaks involve a relatively large number of people, they are seldom reported to the health department. Such a symptom-complex with negative bacteriological and serological findings, points toward an irritant that acts locally upon the gastro-intestinal tract. The more severe clinical types, associated with a limited number of outbreaks, are characterized by a systemic reaction. The incubation period is usually twelve hours or longer, the onset not so abrupt. These approximate a typhoid-like picture. Pathogenic bacteria are usually isolated from the feces, blood cultures are oftentimes positive and there are usually agglutinins against the causative bacterium in the blood of the recovering patient. There are many outbreaks of food-poisoning that fall between these two extremes.

Savage and White<sup>5</sup> have reported that 73.5 per cent. of the 222 outbreaks of food-poisoning in Great Britain and Ireland occurred during the warm months of the year (May to October), 44 per cent. of the total occurred during the hot months of July, August and September. During 1923, in Germany, 59 per cent. of all the yearly food-poisoning outbreaks occurred during the summer months (June to September). These outbreaks were not accompanied by a high mortality.

The herbivorous laboratory animals (rabbit and guinea-pig) are not good experimental animals to study the effects of the ingestion of food-poisoning materials. Most investigators have obtained negative results with these animals. This is not surprising, inasmuch as they seldom ingest

the diet usually given during the experiments and negative results are not conclusive. We have used the dog for our experiments. This animal represents the other extreme, namely, he is a carnivorous animal and possesses a reserve power of gastric secretion that surpasses that encountered in man. It is difficult to cause food-poisoning in the dog under ordinary circumstances. When the dog is placed in a warm room, his only means of maintaining a constant body temperature is by evaporation of moisture from his tongue. When the humidity is raised in such a warm room, the dog's temperature will rise above normal, due to the lack of evaporation of moisture during panting. Such animals have a lowered gastric secretory power and we have found that under these conditions the dog's gastric mechanism is more comparable to that in man. Even under these conditions, we had to resort to the use of only young dogs. The older dogs even under the above mentioned environment were still able to take care of food-poisoned meat.

Table I shows the effect of enteriditis infected meat upon the gastric acidity of young dogs two and one-half hours after feeding. The cool or ordinary temperature, and the warm or summer room are compared with each other. The heated enteriditis infected meat is more toxic than the unheated, the latter containing the living organisms. This substantiates the work reported by Savage and White in England.<sup>6</sup> Table II gives the results of an experiment that illustrates the interference of the gastro-intestinal bacteriocidal mechanism by suppressing gastric secretory activity. This also shows the importance of environmental factors of temperature and humidity upon this mechanism.

TABLE I.

Gastric acidity of dogs 2½ hours after feeding meat and bread in cool and warm rooms:

	Cool Room Temp. 50°, H. 40%		Warm Room Temp. 98°, H. 70%	
	Free Acidity	Combined Acidity	Free Acidity	Combined Acidity
Plain meat and bread— 12 young dogs.....	..	120	..	57
Enteriditis infected meat and bread—14 young dogs .....	..	95	..	35
Heated Enteriditis infected meat and bread —18 young dogs.....	..	90	..	18

TABLE II.

Distribution of *B. prodigiosus* through gastro-intestinal in percentage of amount fed to dogs:

Meat with bread	Before Feeding Per Cent	Stomach Per Cent	Duodenum Per Cent	Upper Jejunum Per Cent	Lower Jejunum Per Cent	Ileum Per Cent	Cecum Per Cent
T. 50, H. 40, plain..100	..	..	..	..	..	..	..
T. 50, H. 40, Enteritidis .....100	..	..	..	..	..	10	10
T. 50, H. 40, Heated Enteritidis .....100	..	..	..	25	35	35	..
T. 98, H. 70, plain..100	15	15	25	35	100	100	..
T. 98, H. 70, Enteritidis .....100	15	25	25	50	100	100	..
T. 98, H. 70, Heated Enteritidis .....100	100	100	100	100	100	100	..

The records in Prussia show that there was a marked reduction in the cremation of spoiled meat, dead carcasses, etc., in 1920-1923 as compared to 1914. In fact, for every one million kilograms of cremated animal meat in 1923, there were 6.25 million kilograms cremated in 1914. This was during the post-war deflation period and the differences between these two figures can only mean that suspicious meat was ingested by the population because of the economic conditions. Chart I shows the cases of "food-poisoning" in Prussia 1907 to 1923 with the average mortality. During the period mentioned above (1920-1923) food poisoning in-

CHART I

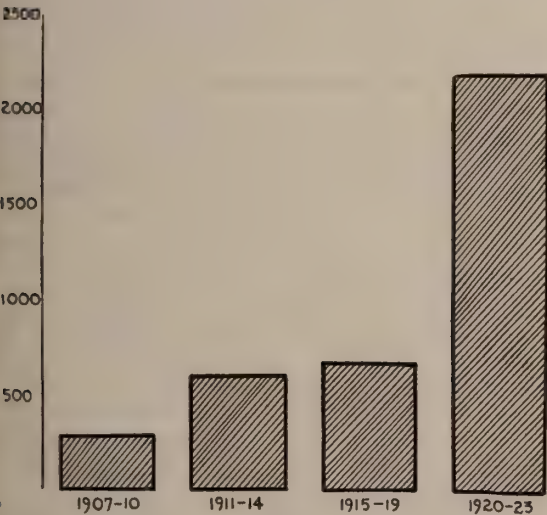


CHART I

Food-Poisoning in Prussia, 1907-1923. Ordinate—number of cases per year. Abscissa—average for years indicated. 1907-10 mortality was 10.6 per cent. 1911-14 mortality was 4.08 per cent. 1915-19 mortality was 10.08 per cent. 1920-23 mortality was 2.5 per cent.

creased 400 per cent. with a reduction in the average mortality.<sup>7</sup> It must be borne in mind that 75 per cent. of these 2,250 yearly cases occurred during the summer months.

We wish to mention a food-poisoning outbreak in Peoria, Illinois, reported by Brophy in the *Illinois Health News* of November, 1926.<sup>8</sup> Sixty per cent. of the 225 people attending a Christian Endeavor picnic were attacked within six to eight hours with acute gastro-intestinal symptoms, nausea, vomiting, diarrhea and abdominal distress. These lasted for six to twelve hours and disappeared. No cases of typhoid or paratyphoid fever developed and no mortality occurred.

CHART II

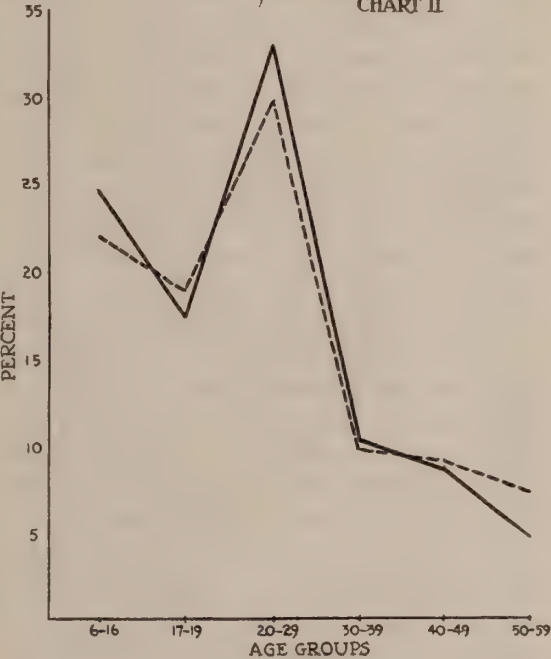


CHART II

Ordinate—per cent of case. Abscissa—age groups. Continuous line—Age distribution of total attendance. Broken line—Age distribution of sick.

Chart II shows the percentage distribution by age groups of those attending the picnic and the percentage distribution of those sick. It is apparent that there was a nearly uniform susceptibility. The older age groups were slightly more susceptible. The meal was eaten about 7 P. M. August 31, 1926. August was a very hot month in Peoria, the afternoon of the picnic was sultry, temperature 82° F. and relative humidity 89 per cent. There were some short showers during the



early evening, interfering with the open air supper. Early darkness caused unusual hurry and worry while eating. This environment was one that would cause a minimum gastric response to food. If any substance or substances that would cause gastric irritation were ingested under these conditions there would be a very susceptible gastric mucous membrane. No bacteria belonging to the food-poisoning group could be found in food or excreta of the patients.

Food-poisoning outbreaks are on the increase and will continue to be on the increase. The human gastro-intestinal tract is susceptible to many irritants. A sudden suppression of gastric secretion associated with a loss of the bacterial killing power of the intestinal tract leads to an effort on the part of this tract by vomiting and diarrhea to remove the offending substance. When this has been accomplished and the stomach acidifies its contents restitution of normal bactericidal power takes place. This acute gastro-intestinal upset increases the hazards to infectious diseases, typhoid, paratyphoid, etc., by converting the gastro-intestinal tract into a culture tube and allows a lengthy sojourn of pathogenic bacteria in contact with the intestinal mucosa.

Food-poisoning was chosen by the author as a subject for this meeting in order to call to your attention the almost forgotten Pettenkofer's conception of the importance of environmental conditions upon the host susceptibility to certain diseases and disorders. We have used suspicious food material from some small outbreaks in feeding young dogs in the hot room and have developed vomiting and diarrhea with some of these samples. In all instances they were negative so far as bacteriological examination was concerned. We feel that to properly evaluate all of the factors in the epidemiology of certain communicable gastro-intestinal diseases, host susceptibility must be considered. The present-day epidemiologist and bacteriologist must augment Koch's exact technical methods with some physiological studies to help elucidate the environmental principles as they affect the host. In other words, we must not discard or forget Max von Pettenkofer, the great sanitarian, in our zealous pursuit of the principles laid down by Robert Koch.

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## DISCUSSION

Dr. Thos. G. Hull, Chicago: I just wish to emphasize that Dr. Arnold's work on intestinal acids explains many things besides food poisoning. It probably explains our seasonal incidence of typhoid fever, summer diarrhea and other things. Dr. Arnold's hot dog method surely is a great help in the running down of food outbreaks. He helped us very much in determining one outbreak in a family. He told us just exactly what food product it was. There are probably a dozen different organisms belonging to the paratyphoid group which will produce products causing food poisoning. It is tremendously hard to find these organisms in the food or even their products in the food. Perhaps the epidemiological evidence will point to certain food but the laboratory has a hard time confirming that evidence. This method can be used with very satisfactory results.

It is a wonder that there are not more food outbreaks. I was over at Urbana a while ago in the laboratory there where they are interested in the canned food problem. They had a great many bulging cans. I asked them where they got so many. They said, "Down there in a grocery store. The grocer is quite conscientious and watches his canned goods and he saves them for us. Every time we go down, we get an armful of canned goods that he has picked out, of bulging cans." I am wondering what would be the situation with a less observant grocer or one who is less conscientious, because that is a total loss for him. I am wondering how many of these bulging cans are sold by other stores and people eat that partially spoiled food.

Dr. Gunderson had some trouble some years ago with three different outbreaks in rapid succession in Rockford, and which I do not think he ever solved to his satisfaction. The epidemiological evidence pointed to a certain thing, but it was difficult for the laboratory to confirm this. I am sure at the present time Dr. Arnold could have helped him.

Dr. J. F. Hultgen, Chicago: I am glad to see that Dr. Arnold took this up experimentally, working on dogs. The thing has been demonstrated very beautifully by various men in various countries, starting with Pettenkofer and the great hygienist, Ranke of Hamburg, and Sedgewick, of Lowell, Massachusetts, who have worked out a sanitary index for their community which I think is absolutely correct.

I just like to have you remember what Dr. Arnold

says, that "the food outbreaks are becoming more frequent and will be more frequent in the future." The more protein food we eat, the more food outbreaks we are going to have. The lower the wages, the higher the cost of living, the more storing of protein food and the more food outbreaks you will have. And in poor countries, like Germany, as you have right now at this time, a large number of food poisoning outbreaks are going to happen.

## TEACHING CLINIC ON HYPERTENSION AND NEPHRITIS\*

RALPH MAJOR, M.D.

KANSAS CITY, MO.

The first patient that I shall present this afternoon belongs to the type of patients that are of especial interest to anyone studying hypertension because they are the type of patients that are caught fairly early with the hypertension. They are the patients with whom perhaps the most can be accomplished.

This young woman comes in for a health examination so that the finding in her case, the presence of hypertension, is rather accidental. You will notice the patient has a large scar on the neck which she says was for the removal of a goiter which apparently was not an active hyperthyroid but one which produced symptoms entirely of pressure. So that I think it is reasonable to assume that this patient's goiter was of the simple colloid type.

The patient's heart is normal in size. Her pulse is 80. Examination of the abdomen is negative. Reflexes are normal. The blood pressure evidence on the first examination was 176 systolic, 110 diastolic. Later examinations have shown the systolic blood pressure has come down as low as 150.

Laboratory findings. Urine has specific gravity of 1010. It contains neither albumin nor sugar. Blood shows a slight anemia; 3,750,000 red; white blood cells, 8,200. Hemoglobin, 70. Blood urea nitrogen, 14 milligrams per 100 c.c. A perfectly normal picture.

This type of patient belongs on inspection to a great group of hypertensives that have been described as the red hypertensive in contradistinction to another group, the pale hypertensive.

This patient's eye-grounds have not been examined. It is rather difficult to say whether the

patient has any beginning arterial changes or not. In our experience some evidence of arterial lesions are met with very early. The statement has been made by Hueck that any hypertension that lasts for more than a few weeks leaves an indelible impress upon the eye-grounds.

I recently had a patient twenty-eight years of age whose hypertension was only of four months' duration. She apparently, however, had her hypertension long enough to show very definite retinal changes. I don't mean retinal hemorrhages, but a curious irregularity of the lumen of the arteries which indicates a beginning thickening of the endothelium.

Now, I hesitate very much to try to classify a patient until I have seen a good deal of that patient. You all know how very commonly patients have a marked elevation of blood pressure which is only transitory. Business reverses, domestic disturbances, the fear of a physical examination, the fear of anything that is intangible often sends the patient's blood pressure up.

We commonly see the statement that the emotional hypertensions are entirely systolic rises. But I feel very certain that diastolic rises as well as systolic rises occur. Patients of this type have a very unstable systolic pressure, and in addition to that an unstable nervous system. Their systolic pressure may vary 35 or 40 points during the day. And they show as a rule a marked fall after rest. I would like very much, for instance, to know what this patient's blood pressure is when she is asleep. I would like to know what her blood pressure is in the morning before she gets out of bed. And I think it very highly probable that this patient, early in the morning before getting up, has a perfectly normal blood pressure.

Now, this is a stage where we ought, theoretically, to get the best results from any form of treatment. This patient is very obviously overweight. Doctor Keeton this morning brought out the splendid results to be obtained especially with these patients from simply reduction in diet and reducing the calories so that the patient loses weight steadily. Many of these patients have an unstable nervous system which is responsible for rises to various heights during the day. I find that such patients do very well when given small doses of such sedatives as luminal or bromides.

I think also many of these patients are greatly

\*Presented before the Joint Session of the Sections on Medicine and Surgery, Illinois State Medical Society, Moline, June 1, 1927.



benefited by hydro-therapy, especially cabinet baths. Many don't respond to that. Those are particularly the patients in whom the hypertension has become rather fixed and who no longer show response to anything.

The question of treatment of these patients with various extracts was brought up by one speaker this morning. This is the type of patient in whom liver extract may give striking results. Those results have to be interpreted cautiously because the blood pressure may come down with very simple measures.

It is very important, however, I think to try out these measures on your own patients, because if some measures are not introduced the chances are that the hypertension instead of being very unstable will gradually go up higher and higher and both systolic and diastolic will gradually have an increasing elevation until we finally reach the stage of fixed pressure when very little can be done so far as lowering of the blood pressure is concerned.

Those of you who were at the morning session may remember that I showed some slides describing the capillaries of such patients. Patients of this type are very common.

The next patient that I wish to present is a striking contrast to the patient just shown. I wish to point out, in the first place, that whereas the first patient was somewhat overweight, red faced, rather flushed, this patient is of a very spare build; and instead of being flushed has a marked pallor. So that if we knew that these two patients were both suffering from hypertension, we could divide them at once into those two great groups I mentioned a moment ago, the red hypertensives and the pale hypertensives.

A further examination of this patient's history and findings brings out the fact that this is an example of hypertension with marked kidney involvement.

Patient thirty-five years of age. She began the latter part of 1924, approximately three years ago, to have headaches and swelling of the feet. At that time it was stated that no albumin was found in the urine.

She came home, had her tonsils removed and, later on, had a very severe hemorrhage. Blood pressure said at that time to have been 160. She went to California for a stay, and came back to Moline, February 23, 1926. The past history is practically negative. The usual illnesses of

childhood. No scarlet fever. No diphtheria. February of last year her blood pressure was 125. Her heart was normal in size. All of these blood findings of course are evidence of a very marked nitrogen retention. Wassermann was negative.

Since that time she has been under observation of Dr. Hauberg. May 19, 1926, blood pressure was 120. February of this year it was 140; April, this year, 175; May 14, 208 systolic and 110 diastolic. At that time she had blood urea of 45 milligrams; uric acid 5.2. Phenolphthalein test was 27 per cent excretion in two hours.

We all know that patients in this stage do not give the most brilliant therapeutic results on our part. But I have wondered a great deal just what the cause of this disease is. True, Bright's disease, fortunately, is not as common as formerly thought.

Is there any way of getting at this condition before it advances to marked destruction of the kidney? The kidney, as you know, shows very little evidence of damage until about three-fourths of the kidney tissue has been destroyed. And yet there is some process which has gone on for a considerable length of time which has led to this destruction. What is this process and what is back of it?

The idea has been recently advanced that chronic nephritis is a disease belonging to the same category as tumors, or neoplasms. I have never seen any evidence to support that idea, and I hope that it is wrong; because if it is a disease belonging to the category of tumors I think our therapeutic outlook is even worse than at the present time.

I have been very much impressed with the work of Dr. Ophüls of San Francisco who has been a very close student of Bright's disease for the last twenty-five years. Dr. Ophüls has shown that in a high percentage of his necropsy material, by careful staining methods, he can demonstrate the presence of organisms in the kidney. He inclines to the belief that chronic nephritis is a bacterial disease and that its causative factor is the streptococcus.

I think there is a great deal of evidence in favor of this view. We know how prone these cases are to follow streptococcic infection. Another thing that makes me feel at least suspicious that this is a part of an infectious process is the

temperature. If a chronic nephritic's temperature is taken three or four times a day it almost invariably from time to time shows a distinct elevation. Of course, when there is an acute exacerbation there is a decided elevation in temperature.

If chronic nephritis really has this etiology, our therapeutics must come long before the Bright's disease is diagnosed.

I felt I prevented it in a series of patients showing albuminuria who have remained quite free from any penalties for several years following the clearing up of infected tonsils, infected teeth or infected antrum.

I think the type of treatment Dr. Hauberg has used for this patient is very good. He has restricted the protein in the patient's food and he has kept the patient at rest, during these periods when there was evidence of increased damage in the kidney. I think one of the very important things about the treatment of chronic Bright's disease is that when they show fever and show an increased amount of albumin in the urine these patients should be put to bed and kept there for as long as two or three months.

Of course, the older German clinicians used to emphasize this point, but I think we have rather forgotten its importance.

Now, seeing this patient recalls to mind certain other types of Bright's disease in which our therapeutic efforts are commonly attended with more success than in this stage. That is in the acute Bright's disease.

I had an experience recently with a patient who developed acute Bright's disease, terrific convulsions and a very high systolic and diastolic blood pressure. We thought it very obvious this patient was going to die and felt that if there was any way of tiding the patient over, there was a chance of the patient getting well.

This patient has several members of the family who were very loyal and devoted to her, and we suggested to the members of the family that we bleed this patient three or four times a day and transfuse her with their blood. Fortunately they all remained loyal until we had removed apparently approximately all the blood the patient had and supplied her with the blood of the donors.

We had a very gratifying response. Following four transfusions in twenty-four hours the con-

vulsions ceased, her blood pressure came down and she went on and made a very successful recovery. About three months after that time she had a perfectly normal urine.

Now, if there is anything to the idea advanced this morning that quanidin or some other toxic product accumulating during suppression of the urine is responsible for uremia it might seem logical to take out this blood and replace it by other blood. I am not prepared to advocate this as a routine procedure, because we have gotten several of them through uremic attacks without resorting to such measures and have been particularly successful with the use of hypertonic solutions of glucose.

This last patient I wish to show you represents one of the common complications of hypertension to which I wish to draw particular attention. The patient we saw a moment ago had a hypertension but in addition to the hypertension she had a marked nitrogen retention. Now that, as you know, is characteristic of patients who are suffering from a true Bright's disease and by this I mean the lesion that is doing the damage is in the kidney.

Now, this other great group of hypertensives which form nine tenths of the hypertension clientele can be sharply differentiated from the chronic nephritis by the clinical course alone. The patients with an essential hypertension uncommonly succumb to a renal insufficiency. It is rather unusual for these patients to have uremia. The two great complications that we meet with in essential hypertension are cerebral hemorrhage and myocardial insufficiency.

I think it has only been recently that we have appreciated what a tremendous role so-called essential hypertension plays in the production of myocardial insufficiency and enlargement of the heart.

I was talking to the pathologist of a large hospital a short time ago. He remarked that a few years ago he saw so many of these large hearts, but they never meant anything in particular to him. Now when he sees a large heart he is willing to wager that the patient had a hypertension. When he looks up the clinical records he finds that his idea is born out by those records.

Now, this is a patient forty-nine years old. She has been ill for six years and during this period of time has had a blood pressure usually around 200, she says, and often going up as high



as 225. Two years ago she had a very marked edema of all serous cavities. Extremely short of breath at that time, and, from the history, had all the indications then of a severe myocardial insufficiency.

Her urine contains large quantities of albumin with hyaline and granular casts. This patient has badly infected tonsils, and marked dental caries. There is a possibility of spirochetal infection here.

She has gradually become more and more disabled by these cardiac symptoms.

Now, this patient to a certain extent presents a rather later stage of the same condition shown in the first patient of that essential hypertension going on later to definite arterial changes and, in addition to that, a marked myocardial insufficiency. The patient is lying down propped up because she is uncomfortable and gets short of breath when she lies down. Her pulse has been running from 120 to 140, markedly irregular.

A more careful examination of the patient's cardiac condition shows she has a very definite auricular fibrillation. Now at this stage of the development of arterial hypertension I feel that digitalis is perhaps the sovereign remedy. Every now and then I meet with some colleague who is very much opposed to the use of digitalis in hypertension. They reason that digitalis increases the force of the heart beat, strengthens the contractions and therefore it must send the blood pressure up; and, if the patient has hypertension already, why give digitalis and send the blood pressure still higher?

That idea was disproved to my certain knowledge as long as twenty-five years ago in a series of observations reported by Price in the *British Medical Journal*. Then the value of digitalis in these cases is borne out, I think, by the evidence. Very frequently we find, contrary to these false theoretical ideas, that digitalis not only does not elevate blood pressure but actually lowers the blood pressure.

Now, there is a phenomenon connected with these patients suffering from hypertension and myocardial insufficiency that is not appreciated as much as it should be. We generally get the idea from text-books when you have a patient with hypertension with myocardial failure that the blood pressure goes down. When you have complete myocardial failure the blood pressure does go down. When the myocardial failure first

starts the blood pressure often goes up quite a bit, twenty-five or thirty points over its previous level. It does one of two things. If the insufficiency is relieved it goes down again rather gradually but still remains at a rather high level, but if the failure is complete it rapidly goes down to practically normal or even a sub-normal level.

## PREGNANCY AND TUBERCULOSIS: TO INTERRUPT OR NOT TO INTERRUPT\*

GEORGE GELLHORN, M. D., F. A. C. S.,  
ST. LOUIS, MO.

When I received your invitation to speak before you on pulmonary tuberculosis and pregnancy and the question of therapeutic abortion, I was glad to accept because this is a most important subject which should be thoroughly investigated both by internists and obstetricians—not, however, separately, as is usually the case, but in joint discussion.

The old conception that pregnancy has a salutary effect on tuberculosis, is, today, only of historical interest. To be sure, pregnancy is a physiological process, but we have come to realize that the dividing line between the normal and the abnormal is extremely fine, and that pregnancy in a sick woman always constitutes a more or less serious complication. In pulmonary tuberculosis in particular, where proper nutrition is of utmost importance, even the ordinary annoyances of pregnancy may unfavorably affect the general condition of the patient. If nausea and loss of appetite can reduce the weight of otherwise normal women, how much more will this be the case in tuberculous patients; and the same holds true of vomiting which, by straining and retching, may, moreover, bring on an attack of hemoptysis. The upward dislocation of the diaphragm and an excessive distention of the abdomen in the last months of pregnancy must needs lead to insufficient aeration of the lungs and thus react unfavorably upon the course of the pulmonary disease. The physical effort of parturition weakens the organism of any woman and, to an even greater degree, one with phthisis. After delivery, the sudden changes within the

\*Read, by invitation, before the Illinois Trudeau Society, at Jacksonville, Ill., November 10, 1927.

abdomen may cause an aspiration of tubercle bacilli from small and isolated foci into all parts of the lungs, and this explains in many cases the rapid development of miliary tuberculosis in the puerperium. Even if the patient has weathered all these dangers, then the weakening effect of lactation may break down her enfeebled power of resistance.

With all these possibilities in mind, it is not surprising that many obstetricians insist that in every tuberculous woman pregnancy should be interrupted as soon as the diagnosis is made.

This radical attitude has, however, met with opposition in many quarters. A number of factors contributed to more conservative conclusions. Some twenty or more years ago social economists in Europe, first in France, later in Germany, became alarmed at the falling birth rate and demanded greater care in preserving fetal life, and this idea of preservation of natural resources has also extended to our country. Out of such utilitarian reasons has grown an ethical conception of the rights of the unborn child. Stronger, however, than any other arguments were certain medical observations which showed that not every tuberculous woman who passed through pregnancy, labor, and puerperium died from her pulmonary diseases, nor that every woman in whom a therapeutic abortion had been performed, could be saved from death.

The principle of interruption of pregnancy in pulmonary tuberculosis has thus become subject to revision, and the problem is once more before us for a decision.

#### WHEN SHOULD PREGNANCY BE INTERRUPTED?

The first thought, as you look back over your personal experiences, will, probably, be the relative infrequency with which cases of this sort are encountered. In almost twenty-eight years of obstetric practice I have seen, perhaps, a dozen such cases. I hope to hear in the discussion how many you have observed individually. In the entire literature, though it is very voluminous, the figures on which conclusions are based, are uniformly small. In one of the German obstetrical clinics, only 150 tuberculous women were treated within a period of 18 years. In another German clinic, there were but 26 cases recorded out of a total of 4,000 pregnant women.

If you contrast with this comparative dearth of material the very large prevalence of tuberculosis the world over, and if you further consider the fact that very many, if not most tuberculous patients are in a sexually active age, that the erotic life of such patients is, if anything, more intense than that of healthy individuals, and that conception may occur in any stage of the disease—then you will be forced to conclude that most cases escape notice simply because they pass through pregnancy, labor and puerperium without conspicuous difficulties. *Such cases, therefore constitute no problem—they have been, and they will be, left alone.*

It is only a much smaller number of patients who will attract our attention, either because we know beforehand that they are tuberculous, or because they develop definite symptoms during gestation. *In these two groups of cases, then, lies the heart of our problem.* This problem places upon us an exceptionally heavy responsibility; but the very fact that, after all, we have to deal with so few cases, enables us to give each patient a great deal of individual attention, and in this we have in private practice a decided advantage over large clinics.

In the first group, namely that in which we have previous knowledge of the disease, we may try preventive measures. We may warn such patients against marrying so long as their tuberculosis is not cured definitely; or, if they disregard our advice, we may at least caution them against having children. But if they ignore both suggestions, then we shall have to protect them against the consequences of their own ignorance or indifference. We shall place such patients under the best possible hygienic conditions and attempt to prevent the development of untoward complications. Here—as always in the treatment of tuberculosis in pregnancy—is a splendid field for co-operation between internist and obstetrician. This hackneyed and rather abused phrase: co-operation calls for a clear definition. As I conceive it, it means that the internist and obstetrician should see the patient *together and at regular, frequent intervals*. Only thus will the patient receive the full benefit of medical knowledge. Unfortunately, a practical difficulty arises at once. The comparatively few well-to-do



patients to whom money is no object, can, of course, obtain the best medical talent in both specialties, and we need not feel concerned about these. But our sympathies must go out to the vast majority of people of moderate means to whom the expense for *one* doctor is a matter of weighty consideration. The only feasible solution is that the two physicians be content with a very meagre remuneration out of all proportion to their time and labor, finding their compensation in the conviction that no other profession, no other group of humans will equal them in practical Christianity. If to this ideal co-operation between her medical advisers, which, of course, must be continued into the puerperium, the patient adds her own whole-hearted co-operation, a happy result may be achieved, and the question of a therapeutic abortion will not even come up for discussion.

If, however, the disease progresses in spite of all our efforts, then we have to deal with the same conditions which prevail in the second group of cases, namely those in whom a tuberculosis is discovered during pregnancy because of the symptoms it produces. It would be presumptive before this audience of experts, to indicate the points on which to make the diagnosis. But for the obstetrician to whom such things are more or less foreign and who is apt to refer any disturbances to the pregnant state itself, it might not be superfluous to remember that cough, expectoration and dyspnea, pain in the chest, hoarseness and pulmonary hemorrhages, fever, sweats and loss of weight are highly suggestive, though not positive, proofs of phthisis, and that such suspicious symptoms demand a thorough physical investigation, examination of the sputum for tubercle bacilli and elastic fibers, and the x-ray photography.

Once the diagnosis is made, a consultation between internist and obstetrician will determine further action.

In almost all obstetrical text-books and special treatises the advice is given to interrupt pregnancy if the disease progresses despite all appropriate treatment, and the apparent unanimity of opinion lends great weight to this recommendation. But if one studies the available statistics, one fails to be convinced that this pro-

cedure should be accepted without reservations. The percentage of failures is, in these statistics, still too high to prove conclusively the value of interruption; and one turns involuntarily to certain reports from tuberculosis sanatoria in which a goodly number of recoveries has been observed even without interruption.

In private practice, at any rate, the induction of abortion would seem to be indicated only in very exceptional cases and only after certain important questions have been given due consideration.

An experienced internist might be able from an estimate of the patient's constitution and her response to curative measures, to predict, to a certain extent, the chances of recovery; and the obstetrician may succeed in aiding his therapeutic efforts by eliminating the disturbances of pregnancy. In such a case, an expectant attitude would, therefore, be justified.

Then, too, the social status of the patient has a definite bearing, and if she is unable to procure for herself the necessities of proper treatment, it is obviously useless to perform an abortion, for she would die with or without it.

There is, also, a difference between primigravidae and multigravidae. We may well remember the classical dictum of Dubois that a tuberculous woman "may bear the first confinement well; the second, with difficulty; the third, never," and we may be more conservative in the first than in a succeeding pregnancy.

We shall, further, bear in mind the accumulated experience that an abortion, if it is to do much good, must be carried out in the first three months, and thus we will, as a rule, exclude from this measure all patients whom we encounter in a later stage of pregnancy.

In general we should be reasonably sure that the mother has a fair prospect after interruption, for if it appears more or less certain that she can not get well even after an abortion, then it is clearly unjustifiable to sacrifice the life of the child unnecessarily.

Tuberculosis of the larynx always gives a most unfavorable prognosis in pregnancy. I have no personal experience with this complication which all authors without exception consider an absolute indication for an abortion. But as the text-

books on internal medicine regard laryngeal tuberculosis as secondary to advanced pulmonary tuberculosis, it seems rather useless to perform abortion if the mother can not live in any case, unless it were to prevent her death during pregnancy.

*Method of Induction.* It seems to me that the technic of interrupting pregnancy is of great importance, and I am rather surprised that so little attention is given to this point in obstetrical literature. It is imperative that the tuberculous patient be spared pain and loss of blood both of which factors would be highly detrimental to her weakened organism. The usual methods of induction or abortion do not satisfy this demand. Whether one uses the bougie and tamponade method or the rapid dilatation and evacuation of the uterus with finger or curette, there is always more or less bleeding and a considerable amount of pain; and if for the latter an inhalation narcosis is given, the danger to the patient is even greater. Far superior in such cases is an anterior hysterotomy, that is, the splitting open of the cervical canal, by which within a few minutes access to the uterine cavity is gained and the contents are removed. This minor operation must be performed under local anesthesia according to the method which I have described elsewhere. The procedure is not only altogether painless but the loss of blood is reduced to a negligible minimum, and the surgical principles employed guard against infection which can not always be avoided in any other method.

*The Conduct of Labor.* The tuberculous woman who goes to term, requires particular care in labor so as to minimize the deleterious strain of parturition. Such a patient should not be permitted to become exhausted from lack of food, but she should have concentrated liquid nourishment in small yet frequent doses. As soon as the external os has become sufficiently dilated, she should have the benefit of a judiciously conducted "twilight sleep" which will carry her with comfort through the greater part of the second stage. At the last, when the passage of the head through the vulva causes excruciating pain which usually requires an additional inhalation narcosis, the infiltration of

the vaginal outlet with a solution of novocain and adrenalin will render this final stage of labor entirely painless. The beneficial effect of this local anesthesia is so striking that I use it as a routine in almost all confinements.

In general, it should be our aim to hasten the delivery in tuberculous patients by any legitimate means, for the shorter labor is, the less it reacts on the organism and the progress of the disease. For this reason, the induction of premature labor is never as good as delivery at term, because artificially induced contractions are invariably weak and the duration of labor is prolonged. We should, therefore, not resort to premature labor unless we fear that the mother might die before full term.

*The Problem of Sterilization.* Most authors advocate sterilization of the tuberculous patient after abortion or confinement. That it would be desirable to prevent the dangers of a new conception, can not well be denied; and in view of the uncertainty of contraceptives, the superiority of operative sterilization appears established. Whether such an operation should be performed in connection with the therapeutic abortion or at a later date, will depend on the condition of the patient. Of even greater importance, however, is the technical aspect of the question. The usual methods are resection of the tubes or supravaginal amputation of the uterus. Both these methods can be carried out only by laparotomy and appear highly objectionable to me because they involve the risk of a major operation and necessitate an inhalation narcosis. A vaginal hysterectomy, on the other hand, is to my mind, far preferable. This operation exerts so little strain upon the organism that it is well borne even by a weakened patient, and—what is still more important—it can be carried out painlessly under local anesthesia without a whiff of ether or other inhalant. The patient retains her ovaries but loses her menstruation, and the prevention of the monthly losses of blood is surely of considerable value in these anemic and undernourished women.

#### THE CHILD

It is the aim of every obstetrician to preserve the life of children. In pulmonary tuberculosis



this conservation attitude is open to the following two objections:

1. It is against all our natural feelings deliberately to let a woman die so that her child may live. I trust the foregoing exposition has shown that no such callousness should govern our actions. We should surround the tuberculous gravida with a much more intensive combination of internistic and obstetrical care than has been the rule in the past, and if there is reasonable hope that interruption of pregnancy will help her to get well, then a therapeutic abortion is clearly indicated. But where the condition of the mother plainly precludes this possibility, then it would not be a fine sentiment but a false sentimentality to induce abortion and thus sacrifice *two* lives, instead of one, to the inexorable disease. This point of view has long been accepted in cancer. No one would think of inducing abortion in a case of advanced carcinoma of the cervix. Rather would we tide the case over without any local or operative treatment until the child has developed to full viability or even term, regretfully abandoning the mother to her sad fate. In this case as in the case of tuberculosis our burden of responsibility is exceptionally heavy, and we must discharge our duty to the best of our knowledge no matter how hard may be the decision.

2. If we thus disregard the mothers and are intent only on saving the children, are we not apt to preserve an inferior strain, to keep individuals alive who already have the seed of the disease in themselves, who will spread the infection, and keep on propagating others like them? This argument seemed weighty enough so long as we believed that tuberculosis can be inherited. Today, however, we know that heredity tuberculosis does not exist, that the tubercle bacillus, except in most uncommon cases, is not transmitted from mother to fetus, and that children of tuberculous mothers are perfectly healthy at birth.

The reason why such children often become tuberculous, is infection *after* birth. The occasions for such an infection are multitudinous and obvious. The newborn should, therefore, be separated from its mother at once. It should not be nursed at the breast, not only because nursing is an added strain on the mother, but because the child thereby comes into too intimate contact with the mother. There are no tubercle bacilli

in her milk, but there are bacilli on her hands, her face, in her sputum, about her clothing. At least, she should wear a face mask when she handles the child, and as it is unnatural for her not to fondle her baby, it is far better to remove the child altogether from her presence and all possible danger. Some five or six years ago I delivered a woman in an advanced stage of the disease. The mother died within six weeks after confinement, but the child whom I had sent soon after birth to the grandparents somewhere on a farm in Iowa, grew up to be a healthy boy. In some such way it seems possible to limit the spread of the disease in the offspring and to justify the conservative attitude in favor of the child which I personally advocate in the question of tuberculosis and pregnancy.

#### SUMMARY

1. While the process of gestation exerts a harmful influence on pulmonary tuberculosis, a very large number of such patients seem to pass through pregnancy, labor and puerperium without conspicuous difficulties.

2. The first confinement is borne better than succeeding ones.

3. The complication of tuberculosis with pregnancy calls for the combined efforts of the internist and obstetrician.

4. Only if these fail to check the progress of the disease, should interruption of pregnancy be considered.

5. A therapeutic abortion, however, is justified only if it promises a benefit to the mother with a reasonable degree of certainty. It is indicated only in a very limited number of cases.

6. Accumulated experience has shown that therapeutic abortion is of value only in the first three months of pregnancy. Abortion in the second trimester or induction of premature labor yield, as a rule, very poor results.

7. The technic of therapeutic abortion is of paramount importance. The patient should not be allowed to suffer pain and loss of blood. For this reason, anterior hysterotomy under local anesthesia is advocated as greatly superior to other methods of inducing abortion.

8. Labor at full term should be conducted in such a way as to minimize the pain and strain of parturition. For this purpose, a combination of "twilight sleep" and local anesthesia of the vaginal outlet has proved eminently satisfactory, and exhaustion should be forestalled by giving

proper nourishment throughout the confinement.

9. If sterilization is decided upon, vaginal hysterectomy under local anesthesia is preferable to abdominal operation.

10. In all procedures, inhalation narcosis should be avoided.

11. The newborn should not be nursed by the mother but should be removed from her presence so as to prevent infection after birth.

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Metropolitan Building.

monary Embolism, Post Operative and Puerperal," which was discussed by Drs. J. E. Miller, E. Zimmermann, W. W. Williams, C. A. Wells, J. A. Koch and W. H. Baker and finally closed by Dr. Dierker.

Both of the above papers were well presented and enthusiastically received. The Secretary made a motion that Drs. Dierker and Rankin be given a rising vote of thanks for coming to Quincy to address the membership. This was unanimously carried. The minutes of the April Council Meeting were read and ordered approved. The Secretary then read a letter from Mr. Leroy Adair approving the series of collection letters that had been submitted to him by the society. A motion was carried that 10,000 of these letters be printed at an approximate cost of \$100. Dr. Koch then made a motion that these letters be sold to the members at one cent per copy per letter and envelope and that only paid-up members appear on the stationery. Seconded and carried. The secretary then told of the plans for May 7 which was supplemented by a brief talk by Dr. C. A. Wells relative to the big public meeting that will be held at that time.

The meeting adjourned at 10:30 P. M.

HAROLD SWANBERG, M.D.,

Secretary.

#### CHAMPAIGN COUNTY

April 12, 1928, was the regular scientific monthly program of the Society. The afternoon was spent at show clinics held at the Burnham City Hospital from 2-4 P. M. and Mercy Hospital at 4-5 P. M. Dr. H. W. Orr, surgeon, of Lincoln, Nebraska, presided and discussed the cases brought into the clinics.

Following the evening dinner Dr. C. George Appelle, president, called the meeting to order at the Champaign Country Club. It was attended by one hundred doctors from Macon, Coles-Cumberland, Piatt, Douglas, Vermilion and Champaign Counties. Dr. H. W. Orr presented a paper on "Treatment of Simple and Compound fracture of the upper and lower extremities." Osteomyelitis illustrated by lantern slides. The doctors in attendance thoroughly enjoyed the interesting and enlightening paper.

G. D. GERNON, M. D.

Secretary.

#### COOK COUNTY

##### CHICAGO MEDICAL SOCIETY

*Regular Meeting, April 4, 1928*

1. Recent Advances in the Treatment of Kidney Infections in Adults and Children—Daniel N. Eisen-drath.

Discussion: Robert Herbst, Irvin S. Koll, Jos. Eisenstaedt, Herman L. Kretschmer.

2. Neuro-muscular Disturbances in Childhood (Movies)—M. L. Blatt.

Discussion: Arthur H. Parmelee, Charles Schott.

*Obstetrical Meeting, April 11, 1927*

Hyperemesis Gravidarum—Edward L. Cornell.

Discussion: Irving Stein.

### Society Proceedings

#### ADAMS COUNTY

April 7, 1928. This was a meeting of the Council held at the home of the Secretary at noon with 8 members present.

The minutes of the March Council Meeting were read and ordered approved. The Secretary read a letter from Dr. Bloodgood in answer to one that had been sent relative to Dr. Bloodgood's activities on May 7. It appeared to be the consensus of the membership that the program on that date should be carried out in accordance with the Secretary's letter. Dr. Wells addressed the Council relative to the public meeting on May 7 and no disapproval was expressed with any of the plans that he had under way. A motion was carried that Drs. Center and Irwin fix the date and place of the annual picnic. The Secretary announced that the 1928 dues had been received from all except three of the members. He also announced that the big All-Day meeting date had been fixed for Monday, October 15. The meeting adjourned at 1:45 P. M.

April 9, 1928. This was the regular monthly meeting of the Society held at the Elks' Club and was called to order by the President at 8:15 P. M. Thirty-one were present.

The program was put on by the Lee County, Iowa, Medical Society. Dr. Wm. Rankin read a paper on, "Intussusception, Cause and Treatment." This was discussed by Drs. H. S. Maupin, Quincy, Earl Cooper, Augusta, B. J. Dierker, Ft. Madison, Ia., W. M. Hogle, Keokuk, Ia., Harold Swanberg and C. D. Center of Quincy and finally closed by Dr. Rankin. Dr. B. J. Dieker of Ft. Madison, Ia., gave a paper on, "Pul-



The Management of Eclampsyogenic Toxemia—F. H. Falls.

Discussion: J. P. Greenhill.

*Regular Meeting, April 18, 1928*

Arthritis—John A. MacGregor, London, Ontario, Canada.

Discussion—Joseph L. Miller, H. Bascom Thomas, E. W. Ryerson, Philip Kreuscher.

*Regular Meeting, April 25, 1928*

The Business Side of the Practice of Medicine—Wm. Allen Pusey.

Discussion: W. D. Chapman, Silvis, Ill.; M. L. Harris, Chas. J. Whalen, Frank R. Morton, Ed. H. Ochsner.

### HANCOCK COUNTY

The society held a very interesting session at Carthage, April 2. It was honored by the presence of two state society officers, Drs. Chapman and Camp.

Dr. C. R. Armentrout of Keokuk, Iowa, gave a very interesting address on "Operations on the Perineum and Vagina After the Menopause." He advocated perineal repair to remedy cystocele and procidentia, preferring in the latter condition this operation to abdominal operations. He advocated hysterectomy in all doubtful cases, as laboratory examinations show a large incidence of incipient malignancy in the long-standing aggravated cases of procidentia. The matter was discussed from the surgical standpoint by Drs. H. M. Camp, Chapman and Cooper, and by several others from the point of view of prevention by attention to the primary perineal lacerations.

Dr. L. C. Pumphrey of Keokuk, Iowa, gave us some valuable experiences of his work as an intern. The discussion of this paper drifted into a discussion of medical economics which appealed strongly to nearly all present.

Dr. Chapman's formal part of the program was "The Work and Duty of the Small County Society." From his wealth of experience in medical society work, he gave much needed heart of grace to our society. He said that the problems of the small society were very similar to the larger ones—that the percentage of medical membership and the relative attendance was often as good in the small as the large societies. He strongly emphasized the value of the county society and its members getting into social contact with other organizations and non-medical people as a means of furthering medical progress. This matter was very generally discussed. Dr. H. M. Camp gave us much insight into all the problems discussed from his experience as a prominent member and official of the State Society. The Hancock County Society wishes to express most sincerely its appreciation of the visit of Drs. Camp and Chapman.

A very pleasant feature of the meeting was the presence of Dr. J. E. Camp, father of our State Secretary. He was for many years a member of our society, though resident of an adjoining county. He is an example of the high type of medical man who has carried through years of hard pioneer practice the

zeal and mental alertness that would honor him in any medical society.

A. M. SHAW,  
Secretary.

### Marriages

DAVID L. HARNETT, Chicago Heights, Ill., to Miss Julia Jonas of Chicago, February 4.

### Personals

Dr. Henry Hertel recently completed his fiftieth year in the practice of medicine, all but a few months of which have been spent in Freeburg.

Dr. George D. Heath, Jr., Springfield, has been appointed health commissioner of the city of Bloomington. Dr. Heath has been an assistant in the Illinois State Department of Health.

Dr. Jacob P. Greenhill, Chicago, addressed the Winnebago County Medical Society, Rockford, April 3, on "Obstetric Cases Shown in Motion Pictures."

Dr. Henry E. Irish, Chicago, addressed the Warren County Medical Society, Monmouth, recently, on "Prevention and Treatment of Heart Disease," and Dr. Aaron Arkin, Chicago, "Differential Diagnosis of Pulmonary Lesions."

It has been announced that Dr. Richard H. Jaffe, professor of pathology and bacteriology, University of Illinois College of Medicine, has been named director of the new pathologic and research laboratory of the Cook County Hospital at a salary of \$10,000 a year.

Dr. Wilbur H. Gilmore, Benton, has been appointed in charge of the roentgen-ray work of Illinois Masonic Hospital, Chicago. Dr. Gilmore formerly was a member of the state board of examination and registration, and for several years was secretary of the Illinois State Medical Society.

Dr. John C. Geiger, assistant commissioner of the Chicago Department of Health under the administration of Dr. Herman N. Bundesen, has accepted a position as associate professor of epidemiology at the George Hooper Foundation for Medical Research and the University of California Medical School, San Francisco. Dr. Geiger has already taken up his new work.

Dr. Wilson Ruffin Abbott, of Chicago, addressed the Tri-City Medical Society, at La Salle,

March 28, upon the occasion of a dinner and evening meeting. His subject was "The Masked Tubercle."

### News Notes

—Physicians changing location are requested to notify the JOURNAL, at 185 North Wabash Avenue, Chicago, promptly. The JOURNAL mailing list is revised every month on the 1st inst. It is therefore necessary to have the new addresses in hand before that date.

—The Commonwealth Edison Company has established a department for the demonstration of appliances for the hard of hearing in room 230, Marquette building, Dearborn and Adams Streets, Chicago. Telephone Randolph 1200, extension 267.

—The bed capacity of the Grant Hospital of Chicago has been increased to a total of 280, in addition to forty-five cribs.

—The Swedish Covenant Hospital, 2749 Foster Avenue, is constructing a \$450,000 addition with a capacity of about 100 beds which is expected to be ready for occupancy September 1.

—The municipal tuberculosis sanatorium has placed in the public schools of Chicago twenty-five specially trained physicians and twenty-five tuberculosis nurses to make physical examinations of the school children. Defects found will be referred to the private physician. The directors of the sanatorium request the sincere cooperation of practicing physicians in the correction of these defects.

—The State of Illinois Department of Registration and Education mailed from Springfield, last September, Illinois license number 17215, issued to Dr. John Edwin Habbe, and license number 17104, issued to Dr. Lorenz Henry Westenberger. These licenses have never been received by the parties concerned, nor have they ever been returned to the department unclaimed. Medical societies and others are requested to be on the lookout for these licenses either by number or by name, as it is possible that they may be in fraudulent use. The department of education and registration will appreciate any information concerning their disposition.

—The State Director of Public Health, Dr. Isaac D. Rawlings, Springfield, reports that there was no diphtheria mortality in forty-four coun-

ties in Illinois in 1927. Two counties, Menard and Stark, have completed a five-year period without a death from diphtheria. The state as a whole, however, suffered a 77 per cent. increase in diphtheria mortality last year, the number of deaths rising from 411 to 647. Cook County (Chicago), it was said, was responsible for the entire increase, 497 lives being lost as against 251 in 1926, or an increase of 98 per cent. Downstate, there was a 6 per cent. drop in the diphtheria mortality. In the thirty-three northern counties of the state outside Cook County, the mortality rate was lowest. The more favorable conditions downstate are attributed to a relatively greater use of toxin-antitoxin, a 25 per cent. decline in mortality being observed in the thirty-four counties south of Montgomery, where the largest percentage of children have been immunized.

—Illinois has a serious rabies problem, according to the state health department. Last year seven persons died of rabies, more than for any other years on record. The laboratory has found positive for rabies dogs' heads from about 100 municipalities. The cities from which the greater number came were Decatur, Evanston, East St. Louis, Harrisburg, Clinton, Marion, St. Francisville and Taylorville. The foci of infection seem to be centered in Cook County in the north of the state, Jackson County to the south, St. Clair and Madison counties on the Missouri border, Crawford and Sangamon counties on the Indiana line, and a central area comprising Sangamon, Christian, Macon, Logan, DeWitt, McLean and Morgan counties. No case in man or dog has been reported north of Peoria except in Cook County. Dogs which bite people should not be killed but kept under close observation of a physician or a veterinarian and the persons bitten should have prompt medical attention. The state department of health will, on request, send a bulletin giving detailed information about rabies.

—A petition for rehearing has been filed by Attorney-General Carlstrom in behalf of the state department of registration and education in the case of Blaine M. Ramsey against the medical professional committee of that board. A strict interpretation of the opinion given in that case would bring into question the legality of all certificates issued by the board under examinations conducted by the committee.



## Deaths

LEONARD C. BORLAND, Chicago; Rush Medical College, Chicago, 1887; a Fellow, A. M. M.; emeritus professor of anatomy, Chicago College of Dental Surgery; formerly professor of physiology, neurology, anatomy and associate professor of neurology and gynecology, Chicago College of Medicine and Surgery; at one time professor of anatomy, University of Illinois College of Medicine; aged 65; died, March 27, of uremia and chronic nephritis.

SANGER BROWN, Kenilworth, Ill.; Bellevue Hospital Medical College, New York, 1880; a Fellow, A. M. A.; member of the American Climatological and Clinical Association, the American Neurological Association and the American Psychiatric Association; formerly professor of medical jurisprudence and hygiene, Rush Medical College, Chicago; at one time associate professor of medicine and clinical medicine and professor of clinical neurology, College of Physicians and Surgeons [College of Medicine of the University of Illinois], Chicago; assistant physician to the Hospital for Insane, Wards Island, N. Y., 1880-1881, Danvers (Mass.) State Hospital for Insane, 1881, and the Bloomingdale Asylum, White Plains, N. Y., 1882-1885, acting medical superintendent in 1886; with Prof. E. A. Schafer, at the University College of London, conducted in 1886-1887 experiments on monkeys which afforded first conclusive proof that in those animals the center for vision is in the occipital lobe; proprietor and medical director of the Kenilworth Sanitarium; aged 76; died, April 1, at the Presbyterian Hospital, Chicago, of acute dilation of the stomach, following a prostatectomy.

WILLIAM ELIAS BURNETT, Norris City, Ill., Medical College of Evansville, Ind., 1884; member of the Illinois State Medical Society; aged 76; died, March 16, of endocarditis.

EDWARD E. BURWELL, Freeport, Ill.; State University of Iowa College of Medicine, Iowa City, 1885; formerly city health officer; aged 66; died, March 3, of chronic nephritis and hemiplegia.

HARRISON GERALD CHAMPLIN, Chicago; University of Illinois College of Medicine, Chicago, 1914; aged 36; died, March 17, of chronic heart disease and nephritis.

PETER P. DUKET, Chicago; Hahnemann Medical College and Hospital, 1893; aged 62; died, March 13, of peritonitis, following gangrenous appendicitis.

CHARLES AUGUST ERICKSON, Chicago; Northwestern University School of Medicine, Chicago, 1903; a Fellow, A. M. A.; aged 51; died, at Albuquerque, N. M., April 3, of tuberculosis.

SHELLEY BARON HALL, Rock Island, Ill.; State University of Iowa College of Medicine, Iowa City, 1892; formerly president of the staff of St. Vincent's Hospital; at one time county physician; aged 67; died, March 27, of diabetes mellitus and gangrene of the foot.

HORATIO KEELE, Chicago; Hahnemann Medical College and Hospital, Chicago, 1872; aged 80; died, March 23, of organic heart disease.

ROBERT B. LEMON, Norris City, Ill.; Medical College

of Evansville, Ind., 1878; Civil War veteran; formerly a druggist, postmaster and a member of the school board; aged 83; died, February 26.

JOHN MATHEW LILLY, Chicago; Northwestern University Medical School, Chicago, 1905; a Fellow, A. M. A.; since 1920 associate professor of medicine, Loyola University School of Medicine; formerly clinical assistant instructor and associate in medicine at his alma mater; attending physician to the Mercy and Cook County hospitals; aged 48; died, April 10, at the Colonial Hospital, Rochester, Minn., following an operation for brain tumor.

CHARLES A. MALLORY, Tolono, Ill.; Eclectic Medical Institute, Cincinnati, 1894; aged 70; died, March 14, of cerebral hemorrhage.

THOMAS F. MARLAND, Chicago; Chicago College of Medicine and Surgery, 1917; member of the Illinois State Medical Society; served during the World War; on the staff of the West Suburban Hospital, Oak Park, aged 39; died, March 12, of bronchopneumonia and acute military tuberculosis.

WILLIAM EARL GARFIELD MAYES, Springfield, Ill.; Washington University School of Medicine, St. Louis, 1904; served during the World War; aged 46; died, March 14, of chronic nephritis and uremia.

JAMES JOSEPH MCCARTY, Chicago; Harvard University Medical School, Boston, 1878; member of the Massachusetts Medical Society; aged 71; died March 18, of carcinoma of the sigmoid.

LOUIS N. PARISH, Harrisburg, Ill.; University of Louisville (Ky.) School of Medicine, 1887; member of the Illinois State Medical Society; aged 69; died, March 7, of cerebral hemorrhage.

ANDY ROYAL, Greenfield, Ill.; Barnes Medical College, St. Louis, 1902; aged 55; died, March 25, of pneumonia.

HENRY A. SCHOAFF, Peoria, Ill.; Keokuk (Ia.) Medical College, 1898; member of the Illinois State Medical Society; aged 67; died, April 4, at Rochester, Minn., of tuberculous nephritis.

EVERETT M. SHIPMAN, Robinson, Ill.; Hospital College of Medicine, Louisville, 1900; aged 53; died March 3, of paralysis of the throat.

C. PRUYN STRINGFIELD, Sarasota, Fla.; Chicago Medical College, 1889; a Fellow, A. M. A.; member of the Illinois State Medical Society; aged 61; was killed, March 6, when he fell from the roof of a nine story building.

JOHN WEAVER, Chillicothe, Ill.; Homeopathic Medical College of Missouri, St. Louis, 1879; aged 76; died, February 25, of heart disease.

SIDNEY CONDON MARTIN, Anna, Ill.; Northwestern University Medical School, 1884; aged 77; died, April 10, of chronic myocarditis.

CYRUS EDGAR PRICE, Robinson, Ill.; Rush Medical College, Chicago, 1893; a Fellow, A. M. A.; member of the Illinois State Medical Society; for many years Councilor of the 8th District; member and past president of the Aesculapian Society of the Wabash Valley; past president and secretary of Crawford County Medical Society; member of District Advisory Board during the World War; aged 58; died, March 27, of myocarditis following several years of diabetes.

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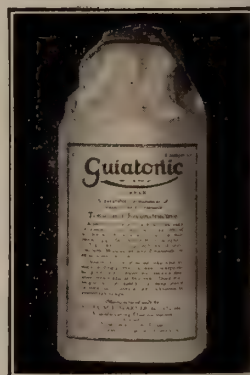
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PRESIDENT, ILLINOIS STATE MEDICAL SOCIETY, 1928-1929





# ILLINOIS MEDICAL JOURNAL

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## ILLINOIS MEDICAL JOURNAL

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## Editorial

### ILLINOIS STATE MEDICAL SOCIETY HAS ENTHUSIASTIC SEVENTY- EIGHTH ANNUAL MEETING

Adjournment on May 11 of the seventy-eighth annual meeting of the Illinois State Medical Society closed one of the most varied and enthusiastic conventions of the organization. Even the large registration failed as an accurate index of the much larger attendance, as the diversified clinics proved such a lure to many visiting physicians that the statistical necessity of registration was overlooked.

Scientifically speaking all papers and discussions were of an extremely high caliber. As all programs were paralleled by a running series of clinics the benefits accruing from the convention were manifold. Clinic attendance showed indubitably clinic popularity.

A great mass of important business, of which a large share was constructive, was disposed of by the House of Delegates. Especially poignant were the reports of elected and of appointed committees that were presented and discussed before the House of Delegates and that will be published in full in the July issue of the ILLINOIS MEDICAL JOURNAL. Readers are asked to peruse these reports carefully as they will be found to yield much that is inspirational and cogitative.

The annual meeting for 1928 of the Illinois State Medical Society, though now a matter of history, will not be forgotten in many years. The program was carried out as planned. Many who were present stated that the clinics were as fine as could be seen anywhere at any time. The scientific programs likewise went according to their schedule and were excellent. The exhibits it is believed were the most quantitative and qualitative that any State Medical Society has ever shown at an annual meeting. The commercial exhibits were carefully selected; only



reliable and strictly ethical concerns were permitted. Those in attendance at these commercial exhibits were unusually courteous and anxious to show their products, while at the same time they were not insistent; nor critical of their competitors.

The Scientific exhibits were remarkable and so worthy of careful consideration that it is regretted that every member of the Illinois State Medical Society could not have examined this wonderful display. Dr. J. P. Simonds, who had charge of this work is to be commended for his efforts and for the time spent in working out plans for these exhibits. Management and employees at the Stevens Hotel were more than cordial and demonstrated an unusual type of co-operation in arranging the various details of the meeting from the hotel standpoint. John F. Bowman, convention manager of the Stevens hotel, deserves special encomium for his valuable assistance and the degree of cordiality shown our members and guests.

The general meetings were well attended. Thursday evening the "Symposium on Medical Economics was very interesting, and it is evident that Medical Societies should pay more attention to these ever increasing problems.

The House of Delegates held the usual two meetings. Work was facilitated at the first meeting on Tuesday evening by having the reports of officers, councilors and chairmen of committees printed in advance of the meeting and distributed to the members of the House so that these essentials could be reported briefly in abstract during the session.

The President's dinner on Wednesday evening was one of the best of the functions. Held in the Ball Room with service unexcelled, the many guests were royally entertained during the dinner. The Chicago Medical Society furnished the entertainment, an unusually good orchestra and a wonderful program adding to the charm of the banquet.

Much credit is due to the General Chairman of the Arrangement Committee, N. S. Davis, and his capable assistants, selected by the Chicago Medical Society.

The scientific exhibit at the annual meeting was the largest ever presented at a session of the state society. The extensive area allotted to this display by the Committee on Arrangements was

completely filled. Thirty exhibitors participated in this scientific section. To make any estimate of the number of visitors was impossible, but at practically all times during the day every booth had interested spectators.

The exhibits were varied in character. A large amount of space was occupied by state and city institutions. The State Health Department had an impressive affair in their Mobile Milk Laboratory, as well as in other matters pertaining to public health. The Chicago State Hospital presented most instructive results of occupational therapy in the form of remarkable products ranging from doll houses to rugs and made by the inmates.

A type of water sterilizer frequently used in hospitals was installed by the Department of Health of the City of Chicago with the usual types of water connections. These were shown to be faulty, for infected water drawn from an instrument sterilizer by a temporary vacuum in the supply pipes was admitted to the sterile water. The Municipal Tuberculosis Sanitarium presented an elaborate array of x-ray films and gross microscopic pathological specimens from cases of tuberculosis. Detailed and painstakingly attractive charts and pamphlets illustrated the scope and nature of work being done by the American Medical Association in its several different fields. Less extensive though similar epitomizations of current work were furnished by the American Dental Association and by the Committee on Education of the Illinois State Medical Society. The American College of Surgeons sent in a portion of their Registry of Bone Sarcoma. The Division of Meat Inspection of the Bureau of Animal Industry was represented by an arresting collection of beautifully mounted pathological specimens obtained from cattle and hogs.

Medical schools of three universities had scholarly representation. The Departments of Anatomy, Pathology, Radiology, Surgery and Neuro-pathology of the University of Illinois presented a praiseworthy group of gross specimens, lantern slides in shadow boxes, x-ray films, models, etc. From the University of Chicago the Department of Medicine showed: 1. a series of x-ray films illustrating diagnostic possibilities within the chest with particular reference to the heart; 2. charts and pictures illustrating experi-

mental cretinism of rabbits. The Department of Pathology of the University of Chicago sent interesting experimental work on gall stones and gall bladder and on the concentration of tuberculin by ultra-filtration.

One entire booth was filled with electrocardiograms from the Northwestern University Medical School and Wesley Memorial and Cook County Hospitals. The Department of Anatomy of the Northwestern University Medical School showed a series of notable models of dissections of various parts of the head and neck, and x-ray pictures of the blood supply of different portions of the body. The Department of Chemistry chose to send the results of vitamin deficiencies; the Department of Physiology, the effects of the newly discovered hormone cholecystokinase upon the gall bladder, and other specimens pertaining to the physiology of the gastrointestinal tract. The Department of Pathology presented a group of mounted pathological specimens from the Frederick Robert Zeit Museum of Pathology. Northwestern University Dental School mixed science with humor through cartoons pertaining to dentistry and pictures and specimens of scientific value.

Individual exhibitors were Doctors Henry Schmitz, J. F. E. Laibe, Philip H. Kreuscher, Robert von der Heydt, C. W. Apfelbach, E. R. Sloan and Harold Swanberg.

The following officers were elected by the House of Delegates: President-elect, F. O. Frederickson, Chicago; first vice-president, J. P. Simonds, Chicago; second vice-president, E. P. Coleman, Canton; treasurer, A. J. Markley, Belvidere; secretary, Harold M. Camp, Monmouth.

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The newspaper is the one great medium through which the Educational Committee has been able, to a small degree at least, to direct the public back to scientific medicine, not through paid advertising, but through press material on health subjects of interest to local communities. The Committee is constantly gathering material, rewriting, censoring and rechecking material for use in the newspapers.

The Committee works entirely through the



local county medical societies and if they do not wish to use the health column offered by this Committee no attempt is made to interest the local editors. However to date there are eighty-one newspapers using a "Weekly Health Letter" or "Health Topics." Most of these appear over the signature of the local county medical society.

In the beginning there was some question as to whether or not a service such as this would be worth while and satisfactory to physicians. However with a steady growth in the number of papers using the health column and the favorable comments which have been received there is no doubt but that the public is satisfied. Very recently a letter was sent out to the editors and physicians in some communities asking for criticisms or suggestions as to how the service might be made more satisfactory. These replies have been interesting.

"Service could not be improved upon, in my opinion. Articles are clear, well written and cover subject nicely. We feature the service with box head and young and old read it every week."

"We will state that the material has been very satisfactory and we have no criticisms to offer."

"Only a few times have the articles seemed to be propaganda in behalf of the medical profession. We appreciate your service and hope that it will be continued."

"Matter is O. K. in every respect. We like it and use it regularly."

From two physicians came the following comments: "The articles have been excellent and I make it a point to read them over myself that I may be prepared for any questions that might be asked."

"Our paper has published the articles right along. I think the articles first class and have no suggestions to make."

Any county medical society wishing to use this service may have the privilege of rechecking the articles before they are published. The material is sent to editors and no charge is made. The Committee is always glad to adapt material to the needs of a particular community, to prepare articles on any group of subjects suggested, and when given proper local cooperation, to arrange material following the trend of local mortality and morbidity reports, contagious, and other specific health history.

## ILLINOIS MEDICAL PRACTICE ACT IS WORKING SATISFACTORILY

The Legislature of Pennsylvania at its recent session had under consideration amendments to their Medical Practice Act. At committee hearings on the bill several misstatements were made relative to the working out of the drugless healer feature of the Illinois law. The secretary of the Pennsylvania State Medical Society, Dr. Walter F. Donaldson, appealed to the editor at various times for information and data which was promptly furnished.

From time to time we have had many requests for information relative to the satisfactory or unsatisfactory workings of the Illinois law.

The following letter sent to Dr. Donaldson is quite illuminating and is printed for the benefit of officers of other state medical societies.

Springfield, Ill., Jan. 21, 1928.

Dr. Walter F. Donaldson,  
8062 Jenkins Arcade,  
Pittsburgh, Pa.

Dear Dr. Donaldson:

I regret very much that I was absent from the city when your letter of January 9 arrived. Upon my return I looked up as closely as possible the activities of the group upon which I reported in the October ILLINOIS MEDICAL JOURNAL and I am now convinced that there is no concerted movement in the direction as claimed.

Upon reading our law, a copy of which you have, you will notice that provisions were made for just such a thing as the drugless healer is attempting to do in the meeting that was held at the Morrison Hotel, but, of course, they are attempting to find a back door route and are not sincere in making up the deficiency which naturally exists between the amount of time and study that they devote to getting a chiropractor's license, and the amount necessary for an unlimited license.

Our law is working very well here in Illinois. The entire examination is given by a group of five medical men, to which there attached one osteopath and one chiropractor. The osteopath merely gives the examination in osteopathy and the chiropractor gives a like examination in chiropractic. They have nothing to do with the examination along medical lines.

Their grade on chiropractic and osteopathy is averaged in with the medical grades for those

students desiring the limited license. We feel that this system is working very satisfactorily. We only recognize two chiropractic schools, both giving a four years' course of eight months each, according to the law. The osteopathic schools have for some time given a four-year course.

We have been successful in defeating the many dozens of chiropractic and osteopathic bills offered in the last five or six sessions of our Legislature, all attempting to break down our law and liberalize their own standing. The Illinois law is fair to all and we feel that we will have no great difficulty in keeping it intact in its present form, although it is bitterly assailed at each session of the Legislature.

The law itself is not in its original form as we offered it, but essentially it was passed as we desired and as above indicated we feel that it is as good a medical practice act as is on the books today.

The Illinois State Medical Society is unalterably opposed to what some states are adopting, known as the basic science law. In theory it sounds very good; it, however, is surrendering the rights of the medical profession to an initial board of laymen who give the basic examination and if successful the medical man goes to his own board and the different cultists to their respective boards for further examination. We believe the method that we have adopted here in Illinois is quite satisfactory, giving the basic and the professional examination at the same time and allowing the cultists to have a representative attached to the board (incidentally, he is not a MEMBER of the board) to give the examination in the tenets of his own school.

I might add, also, that this Illinois law has been attacked by the cultists on four different occasions and every possible angle has been tested in court, and on each of the four different occasions the Supreme Court of the state of Illinois has held the law constitutional and a fair and necessary safe-guard for the public.

Trusting this answers your letter, and if I may be of any additional help to you please advise, and regretting the necessity of the delay in answering, I am

Yours very truly,

JOHN R. NEAL, M. D.,  
Chairman Legislative Committee.

## A WORD TO CONTRIBUTORS

The ILLINOIS MEDICAL JOURNAL is proud of the variety, precision and general excellence of its contributions. Members of the Illinois State Medical society, as well as other practical scientific men are generous in yielding the fruit of their brains and their experience, their skill and their research for general dissemination through the columns of the ILLINOIS MEDICAL JOURNAL.

Many mechanical restrictions are imposed upon the preparation of copy for the printer, in accordance with contracts maintaining wherever publications are issued. Clear copy, on paper of good weight is a paramount necessity. This is a requisite of composing rooms all over the land. The days have gone by when copy such as Horace Greeley sent out will be accepted in the modern composing room.

Strange as it may sound, many men and women of brilliant minds and wide knowledge seem not to know that copy for the printer *must be written on one side only of the paper*.

A successful periodical must also be careful about reprints. Original matter is greatly desired; in fact, is necessitated. Manuscripts are always welcomed. Perhaps a few words may not be amiss at this time, as to some rules by which it is requested that contributors shall be guided.

It is expressly understood that articles contributed to the ILLINOIS MEDICAL JOURNAL have not been offered and, if accepted, will not be offered to another journal for prior or for simultaneous publication. No objection can be raised for subsequent reproduction. It is believed that reprinting or simultaneous reproduction of papers in readily accessible journals in a given field is professionally unnecessary, bibliographically undesirable and economically wasteful. If a contributor has a paper printed elsewhere subsequently to its appearance in the ILLINOIS MEDICAL JOURNAL (excepting a volume of society transactions), due credit must be given for original publication. The editor relies upon all contributors to conform to this rule.

Manuscripts should be typewritten, double spaced, and only clear verified copies presented. Kindly do not send carbon copies. This is an objection based on mechanical restrictions and composing-room demands for legible copy. The



name and address of the author should appear under title of the paper. Literature cited should be assembled at the end of a manuscript in numerical order and should be numbered serially. These bibliographic items in the list should be referred to in the text by numerals in parentheses corresponding with the sequence numerals in the list. Each item in this reference list should consist (in this order) of the (a) numeral indicating its sequence in the list, (b) name of the author, (c) year of publication, (d) exact title of the paper (or book) referred to, (e) full title of the periodical containing the paper, (f) volume numeral for that periodical, and (g) numeral for the first page (or page specially cited) of the paper.

All illustrations should be submitted in such forms as to admit of photographic reproduction without retouching or redrawing. Marginal letters cannot always be set in type and should, therefore, be written in India ink and regarded as parts of the original illustrations; or, in doubtful cases, the marginal lettering may be inserted temporarily, with lead pencil, for suitable attention by the editor. Unless specific instructions are given by authors, the printer will be requested to determine the degree of reduction that may most suitably be applied in illustration. Reproduction of illustrations can be effected most satisfactorily, as a rule, when the originals are large enough to permit of considerable reduction in the plates prepared from them.

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#### EXHIBITORS' PRIZE WON BY DR. SIEBEL

Dr. J. E. Siebel of Chicago won the exhibitors' prize given by the Sherman Bacteriological Laboratories of Detroit. The prize was a Vaccine Case Outfit customarily awarded to one of the visitors to the exhibit of the G. H. Sherman Laboratories of Detroit.

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#### MEDICAL ADVERTISING SOLICITOR WANTED

The ILLINOIS MEDICAL JOURNAL desires one or more advertising solicitors. Perhaps with medical advertising experience preferred. No guaranteed salary. Compensation on commission basis only. ILLINOIS MEDICAL JOURNAL,

185 N. Wabash Avenue, Chicago, Ill.

#### SPECIAL DERMATOLOGY NUMBER OF AMERICAN MEDICINE

The May issue of *American Medicine* is a special Dermatology number. It is so comprehensive in scope, and its twenty-seven original contributions, (some by men of international reputation) so varied and practical, that we believe it will be really almost of text-book value to many practitioners.

Copies can be obtained at 50 cents each by writing American Medicine, 18 E. 41st, New York.

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#### BANQUET OF THE AMERICAN VET- ERANS OF THE WORLD WAR AT A. M. A. MEETING

The military banquet of the Medical Veterans of the World War, section Military Surgeons of the United States, will be held in Minneapolis, commencing at 7 p. m. on Monday, June 11th in the Institute of Art instead of in the Radisson Hotel as previously planned.

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#### ANOTHER PUBLIC HEALTH WORKER LOSES HIS LIFE IN LINE OF DUTY

For more than 20 years the Public Health Service has conducted studies of a very fatal disease which occurs in certain areas in the Western States. This disease is known as Rocky Mountain spotted fever. During the course of the investigations made by the Public Health Service, four workers have lost their lives from the disease, contracted in connection with their official duties.

The most recent worker to lose his life from Rocky Mountain spotted fever is A. Leroy Kerlee, who was employed in the Public Health Service laboratory at Hamilton, Montana, as a bacteriologist. He was a recent graduate of the Montana State College, and had been in the Service since September, 1927.

Those who had previously lost their lives in this work are Dr. T. B. McClintic, who died in 1921; W. E. Gettinger, a laboratory assistant, who died in 1922; and G. H. Cowan, a field assistant, who died in 1924.

The warfare of science against disease has its hazards. A. Leroy Kerlee made the supreme sacrifice in the battlefield of the laboratory.

## A PHYSICIANS' TOUR OF EUROPE, 1928

The price for this tour, all expenses included from New York back to New York, is \$600. Also, as will be noted, it will take six weeks and will visit England, Belgium, Germany, Switzerland, Italy and France with numerous and interesting side trips at the different points visited.

The party leaves for England Saturday, July 7, on the SS. RYNDAM and return from France on the SS. NEW AMSTERDAM, August 15, being due in New York on August 24. Both these ships are well known trans-Atlantic liners, belonging to the Holland-America Line. The steamer accommodations will be tourist third cabin that has proved so popular with professional people. Many people of secure means now prefer this mode of travel because of its comfort, informality and reasonableness. A point well worth emphasizing is the fact that both the steamers which will be used are not now carrying second class passengers and the accommodations which were previously used for this class will be allotted to this party.

The hotel accommodations, although not de luxe, will be of a good, sound type, having in mind the need for comfort, cleanliness and a good cuisine.

En route arrangements will be made for exchange of greetings with the different medical associations and in Germany our hosts will be the German Health Resorts. This Association is showing keen interest in the plans and already the tentative program that they have outlined at Neunahr, Bad Ems, Wiesbaden and Baden Baden, full of sightseeing drives, visits to the different Kursaals, lunches and banquets, will be a noteworthy part of the trip.

A tour manager will accompany the party; will take care of the baggage; will assist the party at the frontiers through the customs formalities; see that reservations are made on the trains, and in fact, relieve the traveler of the necessary but irksome details that are associated with traveling in a foreign country.

Lifsey Tours' experience with physicians' parties has been very extensive, having operated several domestic tours and also the 1927 Medical Economics European Tour, also several parties of lawyers, and are this year conducting their sixth consecutive annual bankers' party in Eu-

rope. Therefore, they are well qualified to know the needs of the American professional man.

The low price of this tour should not deter anyone from joining, as Messrs. Lifsey stand on their reputation to give pleasure and satisfaction to those who join the party.

For particulars write Lifsey Tours, Inc., Hariman National Bank Bldg., 257 Fifth Avenue, New York City.

## AMERICAN MEDICAL EDITORS' ASSOCIATION

(Founded in 1869)

## PRESENT ACTIVITIES AND PAST HISTORY

With the death of the last President, Dr. Henry O. Marcy, the American Medical Editors' Association became inactive and remained so for five years. At the time of Dr. Marcy's death, one hundred and seventeen editors were on the roster.

Early in January, 1928, the present President, Dr. H. Lyons Hunt, called a meeting of a few of the New York editors to discuss the advisability of reviving the Association. The vote of those present was unanimous that this should be done.

That a need was felt for the organization can best be demonstrated by the fact that not only practically all members of the old Association came in, but over one hundred new members made application, so that today the American Medical Editors' Association is stronger and more powerful than it has been in its entire history.

As the organization swung into power, numerous meetings were held, officers elected and committees appointed to study and promulgate a tentative platform representative of the American Medical Editors' Association. Just how the entire Association will stand on these subjects, will largely depend on the information gleaned on each by the committees appointed.

That the Association is functioning with enormous activity, is shown by the fact that committees have been appointed to study and advocate a stand for the Association on the following subjects: "MEDICAL JOURNAL ENDOWMENT FUND." (This is a rather new idea but there seems no reason why medical schools and hospitals should receive endowments while medical journals and those who run them, often at considerable personal sacrifice, should not look



to share in a central endowment fund. Certainly the medical journals constitute one of the greatest forms of medical instruction and teaching in the country and through the profession are of untold value to the health of the nation.)

Committees have been formed to study ways and means of "Standardizing Medical Education" and "Standardizing Medical Licensing Examinations." "Bringing About International Medical Reciprocity." (Four Committees, one in Canada, one in the States, one in England and one in France have already been appointed to study this subject.)

Committees to study Workman's Compensation," "Pay Clinics," "Commercial Laboratories," "Open Hospitals," "Medical Compensation," "Drug Store Prescribing," "Pharmacy and Therapeutic Products," "Electrotherapeutic Apparatus," "Prohibition."

Committees on "Legislation," "Advertising," "Publicity," "Policy," "Public Health," "Medical Economics," and so on, all studying certain questions and working out solutions for the problems involved, for the advancement and elevation of the medical profession and of medical journalism.

The officers of the American Medical Editors' Association are working with might and main for the benefit of its members and deserve their full support through the Journals they edit in advocating the policies the Association stands for.

#### PAST HISTORY

In 1869, the editors of medical journals in the United States, desiring to cultivate professional courtesies, to facilitate the conduct and general management of their journals, to promote their interests, their usefulness, and make them a still greater power for professional and popular good, and especially to advance the interests of medicine, united together and organized the "American Medical Editors' Association."

The idea originated with Dr. Theophilus Parvin, who at that time was Editor of the *Western Journal of Medicine*. The first meeting was held May 6, 1869, at which time a preamble and articles of association were presented. At this first meeting Dr. N. S. Davis, editor of the *Chicago Medical Examiner* and the father of the American Medical Association, was elected President.

The annual meeting for 1870 was held at Washington, D. C., at which time Dr. Horatio R. Storer, editor of the *Journal of the Gynecological Society*, was elected President, for 1870-1871.

The meetings for the years 1870-1871 were devoted to Committee Reports, et cetera, with the exception of the adoption of a resolution introduced by Dr. N. S. Davis to the effect that "The social, educational and scientific interests of the profession would be greatly promoted by a more complete organization in every state and district in our country, such organization being calculated to not only elicit but diffuse knowledge, and also to afford the most efficient means of promoting concerted action on all important questions of medical education and progress."

For the years 1871-1872, Dr. B. F. Dawson, editor of the *American Journal of Obstetrics* was President, and under his administration a resolution was introduced offering an annual prize of \$100 for the best essay on some subject to be decided upon at each annual meeting, the competition to be open to all members of the Society.

Dr. Theophilus Parvin, editor of the *Western Journal of Medicine* and the originator of this Society, was elected President to serve during 1872-1873. Dr. W. K. Bowling, Editor of the *Nashville Journal of Medicine*, served as President 1873-1874. 1874-1875 found Dr. W. S. Edgar, editor of the *St. Louis Medical and Surgical Journal*, serving as President. He was succeeded in 1875-1876 by Dr. A. M. Bell, editor of *The Sanitarium*. This meeting was devoted exclusively to the reading of papers advising a higher standard of requirements for admission to the profession of medicine, the outcome of which was a resolution advocating and advising a three years' course in medicine, and indorsing a preliminary entrance examination for students.

1876-1877, Dr. Horatio C. Wood, editor of *The Medical Times*, was chosen President. He was followed in 1877-1878 by Dr. J. C. Gray of Utica, N. Y., who presented at his presidential address, a paper upon "Lunacy Laws" endorsing and advocating a change of the statutes governing the management of the insane by our public institutions. As the result of the agitation created by his address, many changes were made in

the laws of various states in accordance with the suggestions embodied in his paper.

Dr. William Brodie, editor of *New Preparations*, presided as President in 1878-1879, at which time he presented a paper from "Duty, Scope and Destiny of American Medical Journals," and it is to be regretted that the archives of our Society do not contain a copy of his address, for it would be interesting to know how well he prognosticated the condition existing today, as well as how we have met his ideals of duty and scope. At this meeting a resolution was passed as follows: "We condemn the advertising of nostrums, patented and copyrighted articles in our journals."

In 1879-1880, Dr. S. T. Powell, editor of the *Southern Medical Record*, served as President. For a number of years following this meeting, the Minutes of each session are so incomplete that no facts of interest are obtainable, however, from a few fragmentary scraps in the possession of the Society, we judge the social feature of the Association was paramount.

The records show that Dr. I. N. Love, editor of *The Medical Mirror*, served as President in 1890-1891. Dr. F. L. Sim, editor of *The Memphis Medical Monthly*, 1891-1892. Dr. Frank Woodbury, editor of *The Boston Medical and Surgical Journal*, 1892-1893. Dr. J. C. Culbertson, editor of *The Lancet-Clinic*, 1893-1894. Dr. C. H. Hughes, editor of *The Alienist and Neurologist*, in 1894-1895. Dr. John B. Hamilton, editor of *The Journal of the American Medical Association*, 1895-1896. Dr. Geo. M. Gould, editor of *Medical News*, in 1896-1897. Dr. Hobart A. Hare, editor of *The Therapeutic Gazette*, 1897 and 1898. Dr. Thomas H. Hawkins, editor of *The Denver Medical Times*, 1899-1900. Dr. Alexander Stone, editor of *Northwestern Lancet*, 1900-1901.

It was not until the meeting of 1901, under the presidency of Dr. Alexander J. Stone, that the Society took on any semblance of a regularly prepared program of papers presented.

At the next meeting, Dr. Winslow Anderson, editor of *The Pacific Medical Journal*, was chosen President for 1901-1902. From 1902 until 1907 the history of our Association is within the memory of us all. Through untiring energy and hearty co-operation of Dr. C. E. de M. Sajous (Sajous Encyclopedia) President for

1902-1903; Dr. H. N. Moyer, editor of *Medicine*, President 1903-1904. Dr. Henry Waldo Coe, editor of *The Medical Sentinel*, President 1904-1905. Dr. James Evelyn Pilcher, editor of *Journal Association of Military Surgeons*, President 1905-1906, and Dr. C. F. Taylor, editor of *The Medical World*, President 1906-1907, the membership in the Association was increased from forty-two names to 193 editors, representing 122 medical journals, the best of all the medical journals in both the United States and Canada.

Among the other well-known medical men who devoted themselves to the interests of the Association and the ideals it stood for, serving in the Presidential Chair of the Society, were Dr. T. D. Crothers, editor of *The Quarterly Journal of Inebriety*, 1907-1908. Dr. W. A. Young, editor of *Canadian Journal of Medicine and Surgery*, 1908-1909. Dr. J. MacDonald, editor of *American Journal of Surgery*, 1909-1910. Dr. Walter Wyman, 1910-1911. Dr. Thomas L. Sredman, editor of *The Medical Record*, 1911-1912. Dr. E. A. Vander Veer, editor of *Albany Medical Annals*, 1912-1913. Dr. H. Edwin Lewis, editor of *American Medicine*, 1913-1914. Dr. Edward C. Register, editor of *Charlotte Medical Journal*, 1914-1915. Dr. Geo. M. Piersol, editor of *American Journal Medical Sciences*, 1915-1916. Dr. Geo. W. Kosmak, editor *American Journal of Obstetrics*, 1917-1918. Dr. Seale Harris, editor *Southern Medical Journal*, 1918-1919. Dr. H. S. Baketel, editor *Medical Times*, 1919-1920. Dr. Frank C. Lewis, *International Journal of Medicine and Surgery*, 1920-1921. Dr. Henry O. Marcy, editor *Annals of Anatomy and Surgery*, 1922-1923.

The American Medical Editors' Association took an initiative part in shaping the policy of the medical profession as an organized body and its influence for the elevation of medical standards. The effort to elevate the standard of preliminary education for those desiring to take up the study of medicine. The necessity for a comprehensive list of the names of regular practitioners, with their schools and date of graduation. The state and district organization. Agitation for a three years' course at medical colleges and a preliminary entrance examination for students. Changes in our lunacy laws regarding the handling of the inmates of our pub-



lic institutions. Condemnation of nostrums and patent medicine advertising.

The American Medical Editors' Association was the source from which many reforms for the advancement and betterment of the medical profession sprang, as well as ideas some of which did not take concrete form until nearly forty years after their promulgation.

At the time of going to press for June issue two hundred and fifty of the editors of medical journals in the United States and Canada have become affiliated with the association since the reorganization was started in January, 1928.

The American Medical Editors' Association is capable of wielding an immense influence through activities necessary to correct the evils confronting medical practice in the United States. The field for post graduate education is unlimited.

The proposed activities of the association is shown in the appointment of many committees to study the following subjects:

"Medical Journal Endowment Fund,  
"Standardization of Medical Education,  
"Standardization of Medical Licensing Examination,

"Bringing about of international medical reciprocity (four committees, one each in Canada, United States, England and France, have already been appointed to study this subject),

"Workmen's Compensation,  
"Pay Clinics,  
"Commercial Laboratories,  
"Open Hospitals,  
"Medical Compensation,  
"Drug Store Prescribing,  
"Pharmacy and Therapeutic Products,  
"Electrotherapeutic Apparatus,  
"Prohibition,  
"Legislation,  
"Advertising,  
"Publicity,  
"Policy,  
"Public Health,  
"Medical Economics."

The above list of subjects to be studied does not contain a single subject connected with journalism.

## MEDICINE IS BEING MADE THE GOAT FOR AN OVERCENTRALIZED GOVERNMENT

Medicine continues to be the woden horse for those hosts of bureaucrats seeking transportation into the very midst of the constitutional rights of American citizens. Lay dictation of the practice of medicine, that most dangerous and yet ridiculous usurpation of the privileges of wisdom by the arrogance of the uninformed, is on the increase and those men of medicine who fight against this encroachment are entering the combat not alone for the preservation of their professional honor, through their upholding of their oath to conserve the public health and welfare but their cognizance of what this usurpation means to the life of the nation. Wise men know and wise men warn unceasingly about the fashion in which national government is becoming rapidly a centralized government, as slowly but surely the states are losing their rights, a loss carrying along with its defection, the loss of the personal rights of individual citizens. A new slavery, worse and more protean than that servitude for the abolishment of which the country ran red in 1861-4, threatens the people of the United States. *The diminishing respect for law and order bewailed in every hall and on every street corner, in every home and every counting house, is a direct result of that weakening of the legislative branch of the government in the popular esteem that comes through the ruling powers placed in the hands of a group of bureaucrats to whom congress has delegated almost czaristic powers.*

This bureaucracy through the kindness of congress has the authorization to write rules and regulations that have all the effect of laws, veritable statutes of control inflicted upon the citizens of the United States, not by their own vote, in accord with the constitutional principle, of "Government for the people, of the people and by the people," but despotic statutory control by a minority appointed group working without the handicap of a vote that expresses the true opinion and mind of the citizens of the United States. This is resulting in what has been the world's greatest democracy treading towards the approach to limited monarchy. Everywhere the condition is menacing. More than anywhere else is medicine under the yoke. Let medicine throw

off the burden both for its own sake and for the sake of the country. Doctor, don't let your profession become another wooden horse of Ilium.

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UNIVERSITY OF IOWA PRACTICE OF  
MEDICINE IN COMPETITION WITH  
THE DOCTORS OF THE STATE  
NOT WORKING SATISFACTO-  
RILY TO THE PHYSICIANS  
OF THE STATE

Iowa has been having trouble with corporations and Universities practicing medicine such as brings a blight on the medical profession anywhere. This always results when a University is competing in the practice of medicine with its own graduates, giving a service of a sort at a much lower price than is fair, possible or adequate for proper medical service and not so much to paupers as to persons with ability to pay but an inclination to save.

Herewith is reproduced correspondence exchanged with two Iowa doctors in good standing, Dr. Donald McCrae, Jr., of Council Bluffs, and Dr. Eugene Wolcott of Des Moines. Any man or woman practicing medicine or expecting to do so should peruse carefully this documentary and last months issue of the JOURNAL's documentary comment that shrieks aloud the true status of this free University clinic, for the able-to-pay business.

Council Bluffs, Iowa.  
March 23, 1928.

Educational Committee,  
Illinois State Medical Society:

I am sending your telegram to Dr. W. E. Wolcott, Des Moines, Iowa. He has most of the dope.\* I fear I am too radical. I cannot see why Iowa City should manufacture a finished product Doctor and expect him to locate in Iowa without starving to death.

DONALD MCCRAE, JR., M. D.  
And this from Dr. Wolcott:

March 31, 1928.

Educational Committee,  
Illinois State Medical Society:

*In reference to your telegram this morning:*

I wish to inform you that under separate cover I am forwarding a copy of the Wamsteadt Bill introduced at the time of the last legislation and of necessity sponsored by the State Medical Society. The purposes of this bill as you will

note were directed toward correction of abuses which had crept into the administration of the Haskell-Klaus and Perkins law.

You are undoubtedly aware that under the above mentioned law the indigent poor of Iowa are sent to the State University of Iowa at Iowa City. The hospital then bills the State Treasurer's office for the expense in the care of these cases. Through a one-mill levy spread over the taxable property of the State this money is raised and sent to the State Treasurer's office, where it remains until it is vouchered out by the State University.

According to Senator Hogue's report (Director of the Budget) the service rendered by the State University hospital was not properly distributed over the State, in that those counties near the hospital procured much more service than they paid for, while the outlying counties received little benefit. For instance Cedar Rapids and Linn county received a \$120,000 worth of medical services for \$44,900 paid in taxes. Then another problem was the charging of long distances of simple cases such as tonsils and minor medical cases sent from Sioux City to Iowa City at a tremendous expense. The third problem was that *many people who could well afford to pay found no difficulty in securing free treatment*. Just what per cent. we have been unable to ascertain, but we know many cases from every community in the State.

It seemed that if the money raised by the taxes was kept in the County instead of sent to the State Treasurer's office, a Board of Supervisors would guard more closely and see that trivial cases were not sent such a great distance. It is needless to say that this bill was very strongly sponsored by President Jessup and the Board of Education. It passed the House by a majority but was held up in the Sifting Committee. I have no doubt that if we could have brought the bill to a vote in the Senate that it would have passed.

I would refer you to the last A. M. A. Bulletin and under the subject of "The Care of Indigent Patients" you will find a description by Dr. Thomas Throckmorton, Secretary of the State Society, which sets forth rather closely the situation of our State Medical Society. I would also like to call your attention to the last week's issue of the magazine "Time." Under the head of



medicine you will find a description of the program outlined of the Cornell Clinic with a description of the objections of the grouping of several hospitals in New York City, and it goes to say that Johns Hopkins and Chicago are also developing plans for a similar institution as well as refers to the possibility of extending that service to some of the middle western states, mentioning in particular Minnesota, Iowa, Indiana and Wisconsin. There is food for thought in the material referred to. There apparently is some difference of opinion on the part of the Secretary at Iowa City and the members of the State Medical Society in reference to the amount of clinic material used to teach approximately two hundred medical students. The State Medical Society would appreciate information on this subject from your group.

I appreciate that this is a hurried report and somewhat disconnected, and I should be very glad to learn more in detail of the reasons for the inquiry and we would like to work with you if we have problems in common. One point that I do wish to emphasize—that as a member of the Iowa State Medical Society I do not wish to injure in any way the high standing of the Iowa State University College of Medicine, *but we do feel that there is a very definite tendency for commercializing that institution and making it a great commercial center instead of a real teaching institution and a place where our indigent poor may be properly taken care of.*

W. E. WOLCOTT, M. D.

#### SOME IDEA OF THE SICK MAN'S GOOSE-STEP AS THE NEAR FUTURE IS LIABLE TO HOLD IT MAY BE GLEANED FROM THE FOLLOWING

Trenchant comment in "Time" under date of March 26 deserves reprinting here. What New York has done Chicago always does, and usually goes one step better. What New York and Chicago do, so alas, does the rest of the United States. Some idea of the sick man's goose-step as the near future is liable to hold it—only too liable may be gleaned from reading the following extract. Doctor draw your own conclusions. Perhaps your reflection will produce a protest from you soon at the only place where a protest is worth the weight of a humming-bird's wing—the ballot box. This ballot box stands re-

member, not only at the polls for commonwealth elections but in the sanctity of your city, county and state medical society as well as in the A. M. A.

Here is the article referred to elsewhere in this issue by a prominent Iowa physician.

The comment in "Time" reads:

#### MOBILIZATION

"The old-fashioned family physician has long since given place to the specialist. Now the specialist is finding place in the medical group. All the ills that flesh is heir to can soon be treated in one great clearing house: The New York Medical Center, towering on the northern tip of Manhattan. Twenty acres are its base, from 165th to 168th Street, from Broadway to the Hudson River; twenty-two stories measure its majestic height; twenty millions of dollars have already gone into its construction and equipment; twenty years it has been planning; in this year of 1928 it stands completed, the greatest monument to medical progress in the world. On this single plot of ground will operate the following hitherto scattered Manhattan institutions:

"The College of Physicians and Surgeons of Columbia University.

"The Presbyterian Hospital.

"The Presbyterian Hospital School of Nursing.

"The School of Dental and Oral Surgery of Columbia University.

"The Vanderbilt Clinic.

"The Neurological Institute.

"The Babies' Hospital.

"The N. Y. State Psychiatric Institute.

"Cripples babies, insane, diabetics, men, women, children suffering from ingrown toe nails, toothache, or an untimely encounter with a taxi, all will come to the Medical Centre. Here everything known about medicine will be centralized with a three-fold purpose:

"(1) To give the bewildered sick man a modern substitute for the family physician.

"(2) To enable the specialist to work with other specialists, co-ordinating his research with the discoveries of his colleagues.

"(3) To train doctors, dentists, nurses, social workers, pharmacists together as a working unit in the presence of situations which will later constitute their life work.

"Seen in mysterious cloudy perspective from the Jersey shore, they rise in squat masses which gradually pile up to an impressive futuristic pyramid. A close-up reveals a compact group of eight skyscrapers, the high flat walls uncompromising in their rectangular simplicity. The Presbyterian Hospital, the Sloan Maternity and Squier Urological Clinics form the main stem of the group. Wings come out starkly at right angles, reminding one a little of the flying buttresses of a cathedral, but they are built for service, not for support. Everywhere the walls are pierced by windows, thousands of windows, which relieve their perpendicu-

lar severity. The skyline, too, is pleasantly broken by the varying heights of the horizontal roofs.

### THE IDEA

"Vienna, Berlin, London, Paris, Heidelberg have developed little medical principalities. Harvard Medical School in Boston, Johns Hopkins Medical School in Baltimore, Washington University Medical School in St. Louis, each forms the nucleus of a small group of hospitals. Rush Medical School in Chicago, one of the three oldest in the country, plans an association of hospitals on the Midway. In Cincinnati the Municipal Medical School and Cincinnati General Hospital have fallen into line. The state universities of Michigan, Illinois, Iowa, Minnesota, Wisconsin have taken up the medical centre idea. Somewhat tardy, but by this very delay in a position to profit by all other experiences, certain citizens of New York, with a vigor and vision in keeping with their city's resources, have outdone all other medical establishments.

### HISTORY

"In 1921 a Joint Administration Board was formed to develop a complete medical centre. The plan was given a firm foundation by Mrs. Stephen V. Harkness and her son, Edward S. Harkness. For years they had held the tract of land on Washington Heights, once the American League Baseball Park. When the Yankees moved across the river the land fell into disuse. The Harknesses wished to give it to some worthy public enterprise. The idea of the New York Medical Centre was outlined on paper. And the park where Russell Ford once swung a wicked bat, where Harold Chase caught many a man out on first to the cheers of thousands, was given over to doctors and all their delicate works.

### EQUIPMENT

"The familiar discomfort and feeling of oppressive sanitation that has so long been taken for granted is no more.

### WELCOME

"This regard for the patient as a human being is not limited to the sick room, it extends to the very boundaries of the land. Sick, discouraged, confused, the patient arrives at the hospital. Instead of the dreary delays in dismal waiting rooms, he is now received in a small cheerful office where an expert is ready to pass upon his case immediately. An escort is in waiting to conduct him to the ward best suited for his needs. Meanwhile word is flashed to the clerk of that floor that Mr. John Doe requiring treatment for varicose veins is on his way up in elevator No. 3 and when Mr. Doe steps out there is a friend to greet him by name and help him to bed. The patient's window looks out upon lovely gardens and the peaceful Hudson with the Palisades forming a back drop. Roof gardens, music room, game room, gymnasium contribute toward a mental as well as physical cure.

### LAUNDRIES, ETC.

"Only the mechanics of the institution, the gross impersonal processes where efficiency is measured in

terms of standardization, are centralized. The enormous laundry can handle ten tons of washing a day, the main kitchen can cook 6,000 meals. Heating, lighting, ventilation, hot water, ice water, sterilization and preparation of bandages, everything that ministers to impersonal welfare has been centralized.

### PRIVATE PATIENTS

"The Harkness Pavilion for Private patients occupies the west wing of the hospital. The income from the Pavilion will help run the hospital, and here indeed the atmosphere is that of the most luxurious modern hotel. Each private room has its private bathroom, and many have sitting rooms forming a suite. Fine copies of period furniture, harmonious draperies, papered washable walls, all so treated as to be even more sanitary than tile or marble, create an atmosphere of pleasant ease. *A la carte* menus are provided for those whose desires may dictate their diets, and each patient has an individual locked refrigerator in the kitchen for such dainties as may have been brought or bought. One floor with private elevator has been set aside as a hotel for friends and relatives.

### THE BABIES' HOSPITAL

"Which will be in the east wing of the hospital, is still in an early stage of construction. The campaign to raise \$1,500,000 for this purpose was started last week by the board of directors and the board of women managers.

### GROUP

"By 1929 the Medical Centre hopes to be functioning smoothly for every class of patient, rich and poor, requiring care in bed or in an office, suffering from any disease requiring the attention of a single specialist, or a group, coming as an individual or as part of a community health problem. It will be training medical students, dental students, specialists, public health workers, nurses, social workers, pharmacists, hospital administrators; giving the older men in practice opportunity to keep in touch with new developments; forging in its laboratories new weapons to fight disease. Preservation of individuality applies to hospitals as well as patients. They have agreed upon association without consolidation, co-operation instead of competition, no overlapping of functions, economy of resources by joint action in the purchase of supplies, etc."

### A "CATCHING" DISEASE

Patient (calling on family doctor)—Doctor, my son has scarlet fever, and the worst part about it is that he admits he got it from kissing the housemaid.

Doctor (soothingly)—Young people will do thoughtless things.

Patient—But don't you see, doctor, to be plain with you, I've kissed the girl myself.

Doctor—By jove' that's too bad.

Patient—And to make matters worse, as I kissed my wife every morning and night, I'm afraid she will catch it.

Doctor (wildly)—Good heavens! Then *I* will have it, too!"—*Medical Pickwick*.



IF A DEPARTMENT OF EDUCATION IS  
ESTABLISHED AT WASHINGTON THE  
WHOLE EDUCATIONAL SYSTEM OF  
THIS COUNTRY WILL BE THROWN  
INTO NATIONAL POLITICS. THE  
POWER WHICH LURKS IN THE  
DEPARTMENT OF EDUCA-  
TION BILL

Iredell Meares (Washington Counsel, Sentinels of the Republic) in the May 1st, 1928, issue of the *Woman's Patriot*, a magazine dedicated to the defense of the family and the state shows the dangers connected with the enactment of a law that would create a department of education with a member in the cabinet. We quote:

The bill to crease a Federal Department of Education (S. J. 1584; H. R. 7) is fraught with dangerous consequences to the cause of education. The proponents of the bill contended before the House Committee on Education that, since the elimination of the hundred-million-dollar appropriation carried in the original Smith-Towner bill, which in part would have been distributed to the States on a 50-50 basis as allotted by the Secretary of the Department, if the department were created, the bill conferred no greater power that now conferred upon the Bureau of Education, the Boord for Vocational Training, and other Federal educational agencies, but consolidated them into a department of education, with a secretary sitting as a cabinet officer, which, if done, would make for greater efficiency, economy, and prestige of authority in the administration of Federal activities in education.

There is a danger, however, which lurks in this bill, not discerned, or, at least not discussed, by its ardent advocates.

The scope and objects of the bill are set forth in Section 8(a). It is provided that:

"In order to aid the people of the several States in establishing and maintaining more efficient schools and school systems, in devising better methods of organization, administration and financing of education, in developing better types of school buildings and in providing for their use, in improving methods of teaching, and in developing more adequate curricula and courses of study, research shall be undertaken in (1) rural education; (2) elementary education; (3) secondary education; (4) higher education; (5) professional education; (6) physical education, including health education and recreation; (7) special education for the mentally and physically handicapped; (8) the training of teachers; (9) immigrant education; (10) adult education; and (11) such other fields as in the judgment of the Secretary of Education may require attention and study."

It is to be observed that the author of the bill, not content with its enumerated objects, as far-reaching and inclusive as he defines them, adds the concluding clause:

"such other fields as in the judgment of the Secretary of Education may require attention and study."

No limitations upon his judgment. Everything is educational which relates to man, his physical or spiritual well-being. No restriction upon the secretary's discretion. He may go far afield upon "such other fields" in adventurous research, unrestrained except by fancy.

SAME POWER AS IN SMITH-TOWNER BILL

The quoted section is exactly as contained in the original Smith-Towner Bill. It was predicated upon an appropriation of \$100,000,000. In this bill the appropriation is reduced to \$1,500,000. The same objects and the same power are retained in this bill. It is reasonable to expect, if passed and the Department created, that Congress will be urged, and Congress will be persuaded to increase from year to year the appropriations until they may reach the \$100,000,000 mark. Experience teaches us that appropriations for Federal bureaus and departments have the habit of rapidly increasing in arithmetical ratio to length of existence. The Children's Bureau started in 1913 with the modest appropriation of \$21,936, to reach in 1926 \$1,313,000. The Federal Board for Vocational Education started in 1917 with an appropriation of \$832,426.82 to reach in 1927 an expenditure of \$6,730,305.25, and it is now proposed in Congress to increase it by \$6,000,000 more. (S. 1731; H. R. 12241.)

Greater appropriations will be asked for by this Department of Education, if created, in the ensuing years, and urged with all the glittering arguments as to the efflorescent results accomplished and in process of accomplishment so habitual with heads of Federal bureaus and departments who become inoculated with the spirit of self-importance and super-inflamed with visions of the efficacy to well-ordered civilization of their particular work; provided, and this proviso is always suggested, adequate appropriations are made for its ultimate success.

That it is the purpose of the advocates of this bill, which they now argue is merely the consolidation and co-ordination of Federal activities in education, at present conducted by separate bureaus, into one Department of Education, under the direction of a secretary, who will be a member of the President's Cabinet, to obtain in the future larger appropriations is indicated by the admission of Miss Carl Williams, the legislative secretary of the National Educational Association, who stated before a meeting of that association:

"There is a general understanding among educators that Federal aid will be deferred. Our bill in the last several sessions of Congress has been a doubleheaded one. We have decided it is better to make progress in the one direction that is now open. It is inconceivable that the National Educational Association will ever give up the idea of the extension of Federal aid to education."

THE POWER CONTAINED

The proposed act provides in Section 1 thereof, that: "Section 158 of the Revised Statutes is amended to include the Department of Education, and the provi-

sions of Title IV of the Revised Statutes, as now or hereafter amended, shall be applicable to the Department."

(This reference to Title IV has been brought forward in the Code of the Laws in force December 7, 1925, revised and adopted by Congress, as Section 23, Title V.)

The language of the section mentioned of the U. S. Revised Statutes and incorporated as part of the bill, reads as follows:

"The head of each department is authorized to prescribe regulations, not inconsistent with law, for the government of his department, the conduct of its officers and clerks, the distribution and performance of its business, and the custody, use and preservation of its records, papers and property pertaining to it."

Now, the Supreme Court of the United States has held that where Congress confers upon departments, commissions or bureaus, which it creates, the power to make rules and regulations to carry into effect the objects of their creation, such rules and regulations when made have the effect of law.

"Regulations prescribed by the President and by the heads of departments, under authority granted by Congress, may be regulations prescribed by law, so as lawfully to support acts done under them and in accordance with them, and may thus have, in a proper sense, the force of law; but it does not follow that a thing required by them is a thing so required by law as to make the neglect to do the thing a criminal offense in a citizen, where a statute does not distinctly make the neglect in question a criminal offense."

(*United States vs. Eaton*, 144 U. S., 677; *Caha vs. U. S.*, 152 U. S., 211.)

With the power conferred and appropriations provided, the secretary of the proposed Department of Education could make rules and regulations, set forth the conditions upon which he would allot aid, financial or otherwise, to the several States, educators, schools or colleges, and such rules and regulations would have the effect of law. He could prescribe rules for what he deems better methods of organization, better administration and financing of education, better types of school buildings and their use, better methods of teaching, curricula and courses of study, all of which are within the scope of the proposed department, upon condition that the recipients of his aid shall conform to his rules and regulations. Is it a matter of contributing to the increase of teachers' salaries? He could prescribe the preparation and qualification of the recipients. Is it a matter of helping finance a school building? He could prescribe the plans and specifications and appoint the supervisor of construction. Is it a matter of financial aid to State education? As a condition, he could prescribe the curricula, course of studies, and the school books. He could decline to aid in any manner any State that separated the schools for negroes, Mongolians and white children. In fact, if he is to extend aid to the States, he can become, by reason of the influence he can exert in the so-called

cooperation and distribution of funds, almost the dictator of local or State education. He would become, by the force of natural tendency, the dictatorial head of standardized education for the United States. We don't want standardization in education. We don't want automatic instructors, like modern graphophones, and we don't want machine-made children, like machine-made clothes, but we do want in both personality, initiative and individuality, which can be best developed by each State retaining control of its own educational system.

#### ARGUMENTS OF ADVOCATES

It was argued by the advocates of this bill, at the hearing before the House Committee, that a Department of Education would give prestige and receive respect for research work that cannot be commanded by the Bureau of Education. Every educator who spoke for the bill commended the splendid work now being done by the Bureau of Education and approved the work of the Board of Vocational Training; however, they contended that this work is now "submerged." The present Chief of the Bureau of Education, who was highly approved by these advocates, views it differently. He said in 1925:

"It is not so significant whether this educational unit is called a Bureau or Department of Education, or whether the head of it is called Bureau Chief or Cabinet Secretary, as it is that there shall be a continual development of efficient service by this agency as a clearing house for education."

The deeper submerged the better, for the billows of political agitation will roll on without affecting or disturbing its diligent research and concentrated work in the still depths of its isolation.

It is self-evident, at least to the layman, that if this department is created and the secretary is made a Cabinet officer, the whole educational system of this country will be thrown into national politics. Every time the Secretary of Education is to be appointed, educators throughout the country will be advocating some particular man or men among their class and the President will be under the necessity, in the selection of his Cabinet, to be largely governed by political exigencies. The Secretary of Education, if human, would have the opportunity to build up in support of himself, a political machine throughout the United States, and we have had some conspicuous illustrations of the fact that Cabinet officers may be human—badly human.

The layman, like the writer who attended these hearings, must have been deeply gratified at the wonderful progress in education within the past two decades and the great reduction accomplished in illiteracy, as proclaimed by the educators who spoke, either for or against the bill, before the Committee. It would seem, as a matter of every-day common sense, that if education is making today marvelous progress and if today the situation is entirely satisfactory, there is no justification of experimentally subjecting it to the interference or supervision of a Department of Education,



about the wisdom of establishing which the ablest educators of the country are divided in opinion.

### CONCLUSION

Every parent should feel responsible for the education of his child, every community for the education of its children, and every State for the maintenance of a proper educational system. This bill would relieve them all of their sense of responsibility and would subordinate their activities either to the dictation or undue influence of a central power at Washington. It would be blighting and destructive to the cause of education. It would subject it to political influences. It would create an educational autocracy at Washington. It would inaugurate a centralized power of education to the detriment of local government. Jefferson has said that monarchs and despots have reared their dynasties upon the confidence in them of the people. The liberties of the people, he declared, will be preserved only by constant jealousy on the part of the people in conferring power upon their rulers. We should be exceedingly jealous in conferring power upon any centralized authority in matters of education. The desideratum of the American people in matters of education, as in other things, is to be free from over-much regulation and let alone in their individual and community activities. The proposed Education Department Bill would be an encumbrance upon the present educational situation. It is useless. It is needless. It is dangerous.

## THE PANEL SYSTEM IN ENGLAND UNDER COMPULSORY HEALTH INSURANCE

AFTER FOURTEEN YEARS OF UNHAPPY EXPERIENCE, BOTH PATIENTS AND DOCTORS FIND THE SYSTEM VERY UNSATISFACTORY. PUBLIC DISSATISFACTION HAS RESULTED IN AN ENORMOUS INCREASE OF QUACKERY AND CULTISM.

From a recent London letter to the *Journal A. M. A.*, we abstract the following:

Against the evils of state medicine, the public has frequently and wisely been warned again. As an example the "panel system" of England has invariably been held out to demonstrate the glaringly unsatisfactory results of modern state medicine. But many people do not fully appreciate what is meant by "state medicine," nor what the "panel system" comprises.

"State medicine" may be defined generally as the extension of governmental activity in the health field through creating compulsory health insurance, or free and pay clinics; or distributing physicians; or seeking complete control of medical practice as a public utility.

Lloyd George's national health insurance act of 1911 in England is better known in America as the "panel system." This legislation provides that every person with an income of less than two hundred fifty pounds (approximately \$1,200) must carry health insurance

with the government. The list of the names and addresses of doctors who have undertaken to treat "insured persons" is the "panel"—officially known as the medical list.

In 1924, each insured person paid an annual fee to the government of eleven shillings (approximately \$2.64). This capitation fee continues until the end of 1927. More than fifteen million persons are compulsorily insured in the British Isles, and after fourteen years of unhappy experience, both patients and doctors find the system very unsatisfactory. Some of many reasons for the failure of state medicine in England are:

1. It is an enormous expense to the government.
2. It encourages perfunctory, inferior service and inadequate medical treatment. The doctor receives compensation whether his services are good, bad or indifferent. This is a terrible situation for the people.
3. It develops large numbers of neurotics who run to the doctor with every conceivable ailment, whether real or imaginary. It encourages costly malingering.
4. Public dissatisfaction has resulted in an enormous increase of quackery and cultism.
5. The people lose the right of the individual to select their own doctor. This one item should condemn state medicine for the United States. Individual choice of a physician is an inalienable right.
6. It undermines medical initiative, does not recognize merit, forgets the stimulation of medical research and tends to paralyze medical progress.
7. It discourages the ambitious youth from the study of medicine and so leaves the field to men of inferior talent.

In America we cannot afford to retard the progress of medical knowledge by government control. A scheme, such as the "panel system" is filled with restrictions, and swamped with intolerable "red tape" and graft. We dare not undermine the morale of the forces fighting against disease by placing the control of the sick in the hands of politicians. Public health must not be used as a pawn in a political game. Any system that will standardize sick people into herds and classes is a perilous experiment, inimical to public welfare.

### A SPINE SONG

Call a doctor in the night time  
If your pulse is acting queer,  
For with him it's just the right time,  
To remove your leg or your ear.

#### CHORUS

For it's always fair weather  
When specialists get together,  
With your lungs full of ether,  
And your family full of fear.

Oh, it's always fair weather,  
When specialists get together,  
With a spine on the table,  
And a good saw ringing clear.

—*Med. Herald & Physiotherapist.*

## MAKE A. M. A. HOTEL RESERVATIONS EARLY, MINNEAPOLIS, JUNE 11-15

Those who expect to attend the annual session of the American Medical Association to be held at Minneapolis, June 11 to 15, will do well to make hotel reservations as soon as possible in order to secure satisfactory accommodations for themselves and to make it easier for the Subcommittee on Hotels of the Local Committee of Arrangements to provide accommodations for those who may be compelled to delay making reservations. The chairman of the Subcommittee on Hotels, Dr. F. G. Benn, 1114 Donaldson Building, Minneapolis, reports that there is an abundance of room in good hotels and that satisfactory accommodations may be secured through that committee.

The Committee on Hotels of the Local Committee of Arrangements desires to assist you in making your room reservations and has compiled a list of hotels, which has been approved by the Minneapolis Civic and Commerce Association and the Hotel Association.

### HOTELS AT MINNEAPOLIS

Names and Addresses	—Single—		—Double—	
	Without Bath	With Bath	Without Bath	With Bath
Andrews .....	\$2.00	\$2.50	\$3.00	\$4.00
Hennepin Avenue and Fourth Street	-2.50	-6.00	-3.50	-7.00
Bedford .....		\$1.50	....	\$2.00
1501 La Salle Avenue		-3.00		-4.00
Buckingham .....		\$2.50	....	\$4.00
La Salle Avenue and Fifteenth Street		-3.50		-6.00
Camfield .....	\$1.25	\$1.50	\$2.00	\$2.50
Marquette Avenue and Eighth Street		-1.75		
Curtis .....		\$2.00	....	\$3.00
Tenth Street and Fourth Avenue S.		-3.00		-6.00
Dyckman .....		\$2.00	....	\$4.00
Sixth Street between Hennepin and Nicollet Avenues.		-5.00		-7.00
Elgin .....	\$1.00	\$1.50	\$2.00	\$3.00
Hennepin Avenue and Eighth Street			and up	and up
Francis Drake.....		\$2.50	....	\$3.50
Tenth Street and Fifth Avenue S.		-5.00		-6.00
Hastings .....		\$1.75	....	\$2.50
Twelfth Street and Hawthorne Avenue		-4.00		-5.00
Leamington .....		\$2.50	....	\$3.50
Third Avenue S. at Tenth Street		-4.50		-6.00
Majestic .....	\$1.00	\$1.50	\$1.75	\$2.50
Seventh Street and Hennepin	-1.50	-2.00	-2.00	-3.00
Maryland .....		\$2.00	....	\$3.00
La Salle Avenue and Grant Street		-2.50		-3.50
Nicollet .....	\$2.00	\$2.50	\$3.50	\$4.00
Washington at Hennepin and Nicollet Avenues		-6.00		-8.00
Oak Grove .....		\$3.00	....	\$4.50
230 Oak Grove		-3.50		-5.00

Pauly .....	\$1.00	....	\$1.50	....
Nicollet Avenue and High Street	-1.50		-2.00	
Plaza .....		\$2.50	....	\$3.50
Hennepin Avenue and Kenwood Parkway		-6.00		-6.00
Radisson .....	\$2.00	\$3.00	\$4.00	\$5.00
Seventh Street between Hennepin and Nicollet Avenues	-2.75	-6.50		-30.00
Rogers .....	\$1.25	\$2.00	\$2.50	\$3.50
Nicollet Avenue and Fourth Street	-1.50	-2.50		-5.00
Russell .....	\$1.25	\$1.50	\$2.00	\$2.50
16 South Fourth Street	-1.50	-2.50	-3.00	-4.00
Senator .....		\$2.00	....	\$3.00
314 South Eighth Street		and up		and up
Sheridan .....	\$1.50	\$2.50	\$2.50	\$3.50
Marquette Avenue and Eleventh Street	-2.00	-3.50	-3.00	-5.00
St. Regis .....		\$1.50	....	\$2.50
Marquette Avenue and Ninth Street		-3.00		-4.00
Vendome .....	\$1.25	\$1.75	\$2.00	\$3.00
Fourth Street between Hennepin and Nicollet Avenues	-1.50		-2.50	-3.50
West .....	\$1.50	\$2.00	\$2.50	\$3.00
Hennepin Avenue and Fifth Street	-2.00	-4.00	-3.00	-5.00

### TRAIN SCHEDULE FOR THE A. M. A. MEETING

#### CHICAGO & NORTH WESTERN RAILROAD

The Chicago & North Western Ry. has been selected as the official route, Chicago to Minneapolis, for the American Medical Association Convention by the Chicago Medical Society and De Luxe Special Train will be operated from Chicago 6:30 P. M., Sunday, June 10, arriving Minneapolis 7:35 A. M., Monday, June 11. Special train will also be operated, Chicago to Minneapolis, for accommodation of the Medical Women's National Association, leaving Chicago 10:00 P. M., Saturday, June 9.

Complete service of the Chicago & North Western Ry., upon which extra equipment will be provided during the A. M. A. convention, includes the following trains:

	The Viking	Arrowhead Limited	North Western Limited	North American
	(a)	(b)	(a)	(a)
Lv. Chicago..	10:30 A.M.	5:40 P.M.	6:30 P.M.	10:00 P.M.
Ar. Min'polis	9:35 P.M.	7:35 A.M.	7:35 A.M.	10:05 A.M.
	(a)	(b)	(a)	(a)
Lv. Min'polis	7:35 A.M.	10:45 P.M.	8:00 P.M.	6:40 P.M.
Ar. Chicago..	7:30 P.M.	11:30 P.M.	8:35 A.M.	6:50 A.M.
(a) Via Milwaukee.				
(b) Via Madison.				

Various other organizations and societies affiliated with the American Medical Association are also arranging for special trains and special car parties via the Chicago & North Western Ry. to Minneapolis direct, also via Rochester, Minn., making short stopovers at the world's largest clinic. Special sleeping car service is being arranged locally between Rochester and Minneapolis during the A. M. A. convention for the accommodation of members who may desire to stop over at Rochester on either going or return trip.

#### CHICAGO GREAT WESTERN RAILROAD COMPANY

##### Special Train Service to Minneapolis

On Sunday night, June 10, there will be a special



train service over the Chicago Great Western to Minneapolis for the exclusive use of members of the Illinois Medical Association who will attend the seventy-ninth annual convention of the American Medical Association, to be held at Minneapolis, June 11th to 15th.

If you are planning on attending the convention, a most cordial invitation is extended to you, your family and friends, to join the Illinois Medical Association special train delegation. A very pleasant trip is assured, not only for your travel comfort, but also for the opportunity you will have to meet and visit with friends on the train en route to the convention.

The special train will be a de luxe all-steel, all-Pullman train consisting of the newest type of equipment, including club car, observation-lounge car, and dining car serving dinner on leaving Chicago and breakfast before arrival in Minneapolis.

#### *Train Schedule*

Leave Chicago 6:30 P. M., Sunday night, June 10.

Arrive Minneapolis 7:50 A. M., Monday morning, June 11th.

The Chicago Great Western Railroad is the only road with direct service between Chicago and Minneapolis with optional routing via Rochester with no additional cost, and is best situated to serve the members of our Association.

In addition to the special train service this road will provide between Chicago and Minneapolis, it operates the fastest and best service between Minneapolis and Rochester. Its running time between these two points is two hours and fifty minutes. During the convention regular and special coach and parlor car service and overnight Pullman service will be operated.

#### *Location of Parking Space of Special Trains, at Minneapolis and Rochester*

Special A. M. A. trains operated over the Chicago Great Western will be parked six blocks from the loop in Minneapolis. Street car, bus and taxi service will be available to members.

In Rochester special cars and special trains of the Chicago Great Western will be parked two blocks from the heart of the downtown district.

#### *Reduced Fares*

Purchase one-way ticket to Minneapolis, taking a certificate receipt from the ticket agent. Be sure that your ticket is routed over the Chicago Great Western from Chicago to Minneapolis. The certificate receipt will enable you to secure return ticket at half fare.

Write to E. W. Ireland, General Agent Passenger Department, Chicago Great Western R. R., Room 803, 166 West Jackson Blvd., or phone him, Wabash 2661.

#### *CHICAGO, MILWAUKEE & ST. PAUL RY.*

Make the trip to the A. M. A. Convention with congenial associates. Arrange to meet your friends in Chicago on June 10, then take the new *Pioneer Limited* of the Chicago, Milwaukee, St. Paul and Pacific R. R. (The Milwaukee Road), leaving from the New Union Station at 6:30 P. M. Standard Time (7:30 P. M. Daylight Saving Time), that same evening for Minneapolis. An entire section of this magnificent train will be reserved for the Medical Profession.

It is a treat to ride in this "crack" limited with its latest type luxurious equipment, the inviting and cozy club and observation cars, its attractive furnishings and attentive service.

The *Pioneer Limited* is equipped with all the latest and modern mechanical devices for the comfort and convenience of patrons, including all new equipment equipped with roller bearings, providing for smoother and easier riding, friction buffers that eliminate jerking and jarring, train moving silently and smoothly whether starting, stopping or racing along at high speed. Notable among its other exclusive features are coil spring mattresses in all berths—the last word for restful sleep, a distinctive feature which is not found on any other railroad. Cozy individual bed rooms with real beds, deep box springs and soft mattresses and a number of other distinctive features.

The \$1.50 table d'hôte dinner served on this train is noted for its excellence by people of distinction and cannot be duplicated in any of the leading Chicago hotels for two or three times the price charged.

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## Correspondence

### BEG YOUR PARDON

*To the Editor:*

I am quite sure you will accord opportunity and space to correct the statements, apparently reached through mis-information, relative to the Michigan State Medical Society, State Medicine, Legislation and the University Hospital as published in your Editorial Columns of the May issue. If this condition did exist, as your editorial states, then "To the bystander at large" the conclusion might be justified that we "were well on our way to a program of socialized and State Medicine." Happily your information is *mis-information* as is also your statement that "this is due to the control of the machinery of the State Department of Health, and the interference by the University Hospital, etc."

To confirm that these are erroneous statements and mis-represented facts permit me to submit the following official statement:

(A) Our State Commissioner of Health, though president of our State Society some ten years ago, holds no office in our Society other than being Chairman of our Legislative Commission. This Commission is studying the medical laws of this country for the purpose of drafting a new Medical Practice Act for presentation to our next Legislature. It is supposed that the proposed act will include provisions that will better safeguard the welfare of the people and our profession. Other than this no office in our Society is filled by a member of the State Health Department.

(B) Our State Commissioner of Health from the day he assumed office has not instituted any health measures or promulgated any rules or regulations without first submitting them to the Council of our State Society for approval.

(C) No Clinics are conducted by the Department of Health that are not sponsored and participated in by the local County Medical Society.

(D) The Commissioner has appeared before many of our County Societies and states that his department is not and will not be concerned with the practice of medicine and in all preventative health measures he is keenly eager that the private individual physician shall administer the immunization serums and requests

the doctors to so protect their patients. He reiterates that he will cooperate with the doctors as far as they permit cooperation.

Our Commissioner of Health is not dominating the profession of Michigan or the State Society. Before appointing him, our Governor consulted with officers of the Society and the Society's endorsement was filed with the Governor. For the first time in many years we feel that we have a Commissioner of Health possessed of outstanding qualifications. Qualifications that are reflected in a well earned reputation and ability as a health officer—a reputation extending throughout the country and to which we point with much pride. He is cooperating with the profession as has never been done before and has firmly convinced us that he is intensely sincere in his conducting of the Department to not ignore the inherent rights of physicians. We are convinced that State Commissioner of Health, Dr. Guy L. Kiefer, is not a proponent of State Medicine.

*Legislation:* Your editorial cites some eight bills related in degree to medical practice in Michigan and implies that they were enacted with design to establish state medicine. Again I advise—We have a Committee on Legislation composed of members not affiliated with any health office or state department. During our last legislature this Committee was on active duty in Lansing. In addition our President, Secretary and Executive Committee of the Council made frequent trips to Lansing, held numerous interviews with members of the Legislature, the Governor, presiding officers and Committee Chairmen. Further we had an attorney, paid for his time and services, who remained in contact during the entire session of the legislature. In addition, our then President, Dr. J. B. Jackson and our State Secretary formed a Central Committee composed of two representatives of the following state agencies concerned with health measures: State Dental Society, State Tuberculosis Society, State Nurses Association, State Charities Association, and the Red Cross for the purpose of recording the combined influence of the members of these organizations for or against proposed legislation. No bill was introduced, but what a copy was secured, the bill referred to our attorney and a close study of its provisions was made. In several instances bills were caused



to remain buried in committees. A Chiropractic and Osteopathic bill was defeated. Legislative measures were reported from time to time in the *JOURNAL*. Thus did the Legislative Committee, Executive Committee, Attorney and officers scrutinize the activities of our last legislature. We knew of the enactment of the so-called eight bills referred to. When one reads these bills in their entirety and notes the provisions in detail we do not believe they can be construed as State Medicine measures.

We therefore disclaim that legislation tending toward State Medicine was condoned by the State Medical Society. We further disclaim that the State Society abets the institution of State Medicine.

*State University:* We admit that up to the last few years affairs and conditions at the University Hospital did not meet with the profession's entire approval. We have known that for several years and during those several years the representatives of the State Society have been intently active to bring about a more satisfactory relationship and cause an abatement of certain practices. It was not an easy task or problem, many factors and influences were involved. Progress is being made and, as announced last February, closer liason has been established by the appointment of an Advisory Council, recognized by the Regents. This advisory Council is composed of the President, Secretary, Editor, Chairman of our Committee on Education, and Chairman of the Councils. Committee on County Societies as representative of our State Medical Society. This advisory Council will still more intimately concern itself with University Hospital affairs. It is our eventual hope that satisfactory results will attend the Council's labors.

Our State University is *our* University in which we as citizen's and taxpayers have just pride. At times we may have been negligent in failing to exhibit interest, but that day is past. It must be remembered that it is a great institution in which many and diversified state interests are centered and that its management is fraught with many complex problems involving many factors. Its policies cannot be created, amended or abrogated at the moment. The interests of all must necessarily receive consideration. Our State Society is alert in representing the profession's interests.

The University does not dominate the State Society—it did ignore the State Society in years past, **but** the evidence is quite convincing that now **the** State Society will receive consideration and **the** Society's expressions will receive just recognition.

We, in Michigan, are jealous of our reputations and resent misleading, unsubstantiated implications. We feel we are in alert, intimate contact with all state affairs that bear upon medical practice, public health activities and state medicine. We too recognize that in our midst there **are** clinics sponsored by social reformers under **lay** direction, but not any more so than in Illinois, and we are engaged in an attempt at their **control**. We prize your solicitousness but just **now** it is our urge that you do not impugn conditions in Michigan until you actually possess facts. The officers of the Michigan State Medical Society will always be glad to supply facts of a nature that is absolutely authentic and not deduced from aberrant machinating minds.

The problems of social medicine—the policies of clinics, lay dominancy of so-called welfare movements, the conduct of University and teaching hospitals, the demarcation between public health and preventative health measures and state medicine so-called are stupendous problems, tremendously exacting in their multiple impingements upon every phase of human life and activity. Solution and adjustment is not born of the moment nor in a single group. The demand **is**, that all sincerely and determinedly, seek **the** ultimate answer—you in your field and sphere and we in ours, in order that from the combined attrition of earnest minds and the interchange of reason, judgment and discernment definite applicable policies be instituted. In doing so it ill becomes us to broadcast aspersions upon state groups—especially so when the assailed group is honestly in quest of light and guidance as is too the profession of Illinois. We in Michigan assure you of our friendly esteem and good will and sincerely desire to merit in like manner the esteem of the profession of Illinois and its valued publication — the ILLINOIS MEDICAL JOURNAL.

By direction of the Council,

F. C. WARNSHUIS,

Secretary.

## Original Articles

### PRESIDENT'S ADDRESS

#### THE PRACTICE OF MEDICINE RETROSPECT AND PROSPECT

G. HENRY MUNDT, *M. D.*

CHICAGO

Since the beginning of time medicine has practically been a curative art. There are, however, some outstanding places in history in which the importance of preventive medicine has been appreciated. Probably one of the earliest appreciations of preventive medicine was in the sixth century B. C. when Cyrus the Great took drinking water from home for his army. Cyrus reported to his father that he had provided his army with competent physicians. His father is reputed to have said, "These physicians of whom thou speakest are like menders of torn garments, they cure those who have fallen sick, thy chief anxiety should be to provide for health for thou oughtest to take care to prevent thy army from falling into sickness at all." Hippocrates advocated the boiling of drinking water.

The Romans built great aqueducts and sewerage systems; they recognized the basic principles of sanitary science.

No evidence is to be found of the appreciation of the importance of preventive medicine from the time of the fall of Rome until about the middle of the nineteenth century from which time dates all of the great advance of preventive medicine under the protection of which we live today. About the middle of the nineteenth century Chadwick and Simon revived sanitation as we understand it today and from this period on great strides have been made in the prolongation of life as well as in the general improvement of health.

At about the three quarter period in the nineteenth century the discoveries of Pasteur and Koch made possible the combat against specific diseases. It is true that Jenner in the late eighteenth century produced conclusive evidence that smallpox was preventable by vaccination. This can, however, hardly be called a discovery because Jenner availed himself of knowledge which was common in the rural communities of France and England and probably also in

Turkey. The chief debt of civilization to Jenner is that he had the ability to make accurate observations, precise records and the temerity to insist that his observations were correct. This probably is one of the outstanding examples in medical history in which the dogged tenacity in the insistence of the rightness of observations places a man in the forefront of health benefactors. The period of about forty years from about 1875 on is a very bright page in the discovery of disease producing bacteria. Men seem to have almost fallen over one another to announce the discovery of the cause of certain diseases until today as a result of these epoch making discoveries typhoid fever, cholera, smallpox, yellow fever and malaria are rarities in the modern practice of medicine, while diphtheria and tuberculosis are decidedly on the wane.

Based on the knowledge of sanitary science as well as knowledge of the specific causes of disease the death rate of infants during the first year of life has been reduced from more than twelve per cent. twenty years ago to seven or eight per cent. today.

Civilization is indebted to medicine because it focussed in the minds of people the fact that public health is purchasable. Not always have the public felt that medicine did not have an ulterior motive in trying to put in force the great measures of preventive medicine which have come to us very largely within the last fifty years. It should hearten those who are trying to help the public to know that motives are frequently misunderstood, especially is this true in this period of the go-getter and when success seems to be considered by some to consist in getting what one wants.

What has all this to do with the practice of medicine in retrospect and prospect? The foregoing described things have greatly altered the practice of medicine and other changes just as apparently radical as those which have come into practice are destined to come. Do not think that I am admitting that we are definitely headed toward the socialization of medicine. It is my opinion that there still is and for many years will be a sufficient appreciation of the importance of personal contact between the patient and the personal physician to delay for a long time the advent of state medicine in this country.

The practice of medicine has been from the



earliest time almost entirely curative in character. Until comparatively recently the conflict between the various schools of medical thought were antagonistic to say the least and frequently showed no trace of the tolerance which science should engender. Not until definite knowledge existed as to the cause and prevention of some diseases was medicine sufficiently well enough informed for the entire group to think as one. Probably we have inherited some of the difficulties which face medicine today.

I frequently think of a talk made about twenty years ago by an older physician on "Medicine in Englewood Forty Years Ago." I think I shall never forget his first statement. He said, "If one-fourth this many physicians had been together in one room in Englewood forty years ago there would have been a riot call." We may well be thankful that this extreme antagonism in medicine is a thing of the past. There are, however, some points in which we are not all as yet thinking as one, and I believe it possible for us to get closer together in our thoughts than we are today.

There doubtless are physicians here who can remember the time when most of their work in the practice of medicine consisted of seeing persons ill with infections which we know today are preventable and which now are largely prevented. Night and emergency calls were the common thing for the doctor of twenty-five years and longer ago. This character of practice has been materially reduced. Office work consisting of careful examination and the outlining of a hygienic regime and treatment was so small a part of the practice of medicine at the beginning of the twentieth century that it was practically negligible, while today a survey of the character of practice covering over twenty thousand visits shows that of those visits fifty-five per cent. were in the office, thirty-five per cent. in the home and ten per cent. in the hospital. One needs only to think of the great change which has taken place in obstetrical practice from the time when labor pains caused the first call for the doctor to the present time when large numbers of women are under careful observation from the earliest period in pregnancy. The present enviable position of pediatrics is the result of a campaign for better, healthier babies and the pediatrician stands today as the bright example of the feasibility of the private prac-

tice of preventive medicine. This group of the general medical profession has much which we may well learn. These men are in many regards the example which we may hope to emulate. It may be well here to say that the decrease in infant mortality and morbidity is not alone the result of the activities of lay groups but is to a considerable extent a result of clean milk, clean water and general hygienic knowledge. At times enthusiasm waxes so high on work of organizations that too much credit is given to one thing with little or none to the basic cause for advance.

It is frequently said that medicine is the only profession which is deliberately committing suicide. Little credit would be due to medicine if we really thought this. No man in medicine would, I believe, ever consider personal financial gain in preference to the welfare of his patient or of the body politic. This explains why our profession has welcomed, yes produced this new era in the practice of medicine.

The thinking men all over the United States today know that there is a great economic problem facing us which we must solve if we are going to be true to ourselves and to the public. It may be well for us to remember that ambition is usually proportionate to capacity, and if we really determine to solve this problem it can be done.

Man is always interested in his health and general welfare, but usually not until he feels that he is in great danger and that was never more true of an individual than it is of the medical profession today. Not until we seemed to be in very dire straits economically was it possible to speak of this subject in a medical organization. There have been sporadic efforts to organize physicians for economic purposes but these have, on the whole, been unsuccessful because there was a feeling among many physicians that medical societies existed only for the advancement of scientific medicine, and if I had any fault to find with the men who have gone before in medical organization it would be that they did not appreciate the importance of the consideration of the economic questions, however, I hasten to say that we should avail ourselves of that wonderful saying "forgive them, they know not what they do."

Even today there are many men of the highest scientific standing who fail to consider the ava-

lanche which is destined to overwhelm the profession unless there be developed a unity of sentiment regarding our great economic problems. Five years ago even in Illinois it would have been almost heresy to say this but I doubt not that ninety per cent. of the men in organized medicine today would agree with me that we are face to face with the greatest crisis that has ever threatened an honest group of the general public.

Changes have come so insidiously and from such apparently honest and necessary places that until medicine was really threatened we did not awaken. It would be only honest to say that medicine is at least partly responsible for our difficulties because of the well known lethargy of physicians as well as the fact that practically all of the baneful influences have come with the sanction of outstanding scientific medical men.

In no line is America more peculiar than in medicine. The development of the practice of medicine in this country has been different than its development in continental Europe or even in the British Isles. In no line has the widely heralded opportunity for the poor boy been better exemplified than in medicine. All one needs to do is to acquaint one's self with the early history of many of the outstanding medical men in Chicago and one will be satisfied of the truth of this statement.

Early in medical history in this country men of vision and enthusiasm went to Europe and saw the great medical centers, great largely because of the abundance of clinical material which was usable to the end. In no place in this country have we had the privilege, for instance, of carrying patients through illnesses and on their death having complete autopsies. This opportunity in European centers has been one of the chief factors in making European medicine great.

Those American physicians who went to Europe returned with boundless enthusiasm and the desire to make medicine as complete here as it was in Europe and they started to build up huge clinics among the people who in all other lines were self sustaining. Medical schools, especially in our great cities, developed and increased in number largely because of the desire of medical men to become eminent physicians and in each instance there was developed a free clinic. These free clinics were doubtless a neces-

sity for medical teaching, but there were many people amply able to pay a private physician who sacrificed their personal independence and became patients at these centers of medical charity. For many years medicine has known this but it never found serious fault with it because it was known that clinical material was necessary for teaching, however, it has been well known that there was great abuse of medical charity in this country. It should be as necessary for an individual to demonstrate his need of assistance before receiving free medical advice (other than in emergency) as obtains in the receiving of other charity. This may seem an extreme statement but it would have the sanction of the vast majority of physicians and also of a considerable proportion of the thinking public.

Recently there have been lay groups with more enthusiasm than knowledge, frequently with the backing of outstanding physicians enter health activities which apparently were for the eventual good of the people but which are, I believe, destined to be decidedly detrimental. These organizations were early dominated by medical men but eventually they got beyond the control of their medical sponsors. I believe frequently these sponsors are embarrassed by this loss of control. Sometimes statistics which were quoted to justify certain organizations activities were, I believe, not absolutely honest. In most of these activities the very people who were supposed to do the work i. e., the physicians were the ones above all others who were not adequately if at all compensated. Bureaus have been established on what is generally known not to be sufficient grounds and I think it is to the everlasting credit of the Illinois State Medical Society that it was able to keep out of the state one of the most pernicious pieces of legislation ever foisted on the general public, i. e., The Sheppard-Towner bill. All one needs do to receive enthusiastic support it seems is to raise the hue and cry that we are about to save somebody, especially the babies. I should like to state in no uncertain terms that if I felt the Sheppard-Towner legislation could do what its proponents claim it can do I would support it to the limit.

In the last ten years there has been developed in this country the spirit of paternalism which is, I believe, to the eventual detriment of the



people. The economic welfare of the people of this country has come about because of independence and not because of dependence. When you take from man the incentive to work and thereby gain success you have removed the greatest influence for success; for this reason paternalism is bad for the morals of the general public as it is bad for the medical profession.

Another influence which has come into existence gradually and at first I am certain with no thought of the serious consequence it might have on the general public is the practice of medicine by Universities in the form of pay clinics. No other department of teaching would think of entering into competition with its graduates as the medical departments of some universities do. If this competition was entered into in other professions I can imagine what pressure would be brought to bear to abrogate the activity. I can imagine what the legal profession would say and do if the law department of any university should go into the private practice of law. It may be argued that it is necessary to have clinical material to teach medicine. The medical profession knows this very well but they feel that there is and always has been ample clinical material for all teaching to be found among those unable to pay.

Frequently we hear that there are only two classes of people who receive adequate medical attention, that is, the very rich and the very poor, leaving the great middle class without satisfactory medical attention. It is my belief that the middle class is given good attention by that group of the profession which serves them and they are the largest group. Certainly on the whole the middle class (and I am not sure who the middle class is) receive as good attention as the very rich or the very poor. It might well be asked who endows dollars with the brain power to choose the highest grade medical service. It is the duty of every physician to at every opportunity challenge the statement that only the very rich and the very poor receive adequate medical care.

It is only fair to say that we in Illinois are not yet in competition to any great extent with universities practicing medicine but it is necessary that we ever be on the qui vive to see that this condition does not overwhelm us as it has almost done in some states. I am not questioning the good intent of some of the men who

advocate this pernicious thing but I do question their good judgment, very largely on the basis that anything which reduces the efficiency of the general medical profession especially those in the highways and byways of life will eventually be detrimental to the public.

A condition which definitely confronts medicine at this time and which I think is probably the most advanced thing toward the advent of state medicine is the establishment of general clinics to be used by all of the citizens by official boards which have previously been interested in the maintenance of hospitals and clinics for the indigent, at least it has been purported their interest was to maintain service for this class of cases. These clinics are manned to a very large extent by physicians very inadequately, if at all, compensated and even the full time physicians are very poorly paid. This condition today confronts the profession in Illinois, and must be met actively and with a united front.

One of the things about which the economist frequently talks is the high cost of medical service and frequently the patient who is operated on and confined to a hospital is cited as an example of the hardship suffered because of the present arrangement of medical practice. Bear in mind that hospital service is a very small proportion of the service of the medical profession, much less than ten per cent. and that the medical profession is not responsible for the high cost of hospital service. One disturbing factor in this is that the ordinary individual who enters the hospital wants only the best even if it is a hardship to pay for it. It is my opinion that frequently the need of the special nurse is over stressed largely because people want them. The nursing profession say there is not an over abundance of nurses. Therefore, we should be careful not to advocate specials in trivial cases. I believe that eventually an efficient method of group nursing will be worked out to the benefit of all concerned. Bear in mind that I have no controversy with the nursing profession; the medical profession is probably as much responsible for this condition as the nurses.

More than ninety per cent. of illnesses today are not controllable on the community basis. They must be controlled by personal service of physician to patient and it is possible for medicine to solve its economic problem by taking care of these ninety per cent. of illnesses and in

addition by acting as personal advisors in health matters. In a survey made by the Commission on Medical Education it was found that less than one per cent. of the service of physicians was of a healthy advisory character. We are losing a great opportunity for service unless we again get to our primary function, that is the function of a teacher. Medicine can if it wishes lift itself out by its own efforts from its economic difficulties if we will but embrace the periodic health examination and its many ramifications. The American people are sold on the desirability of regular inspection of their motor cars. They have their babies inspected at regular intervals by the pediatricians and will embrace the periodic health examination of adults if medicine will adopt this very important function. As a matter of fact I believe that the general public are better sold on the periodic health examination than is the medical profession. Not because the doctor does not appreciate the importance of this advisory service but because his entire training has been focussed on the curative aspect of his work.

No, I am not unduly alarmed. I see only that which is visible to anyone who will give some attention to conditions as they are developing in this country. It has been said that medical men must either be the architect or the hired man and I make a plea to you that every man in organized medicine get behind the effort to have medicine direct and control the building of the health house. Otherwise we will find ourselves in the position of the hired man being directed very largely by lay people and in most instances by people with no clear conception of the duty of medicine to the public or of the public to medicine. The medical profession individually and collectively is quite prosperous at this time and it is this condition of prosperity which has lulled some into the feeling of security which really is not warranted by a close study of conditions. It is quite typical as is frequently said that there is "always a calm before the storm." A friend of mind told me of a medical meeting at which a man brought up one of the economic aspects of medicine and a man leaned over to him and said, "empty pockets talking." I am actuated in my attitude in this matter by the impending economic difficulties which I see in the near future for the medical profession. Osler said "that many men

should pray the prayer of the litany against the evils of prosperity." No truer statement was ever made. It is difficult when a physician has reached a position of affluence for him to understand and advocate those measures which are for the best interest of the medical body and hence for the best interest of the public.

That those physicians who are giving their time and effort to the welfare of medicine may not lose heart I should like to give them one quotation to take unto the heart, "those who can do little themselves find most fault with what others do."

It is necessary if medicine is not to fail in its duty that a much larger proportion of physicians become interested in the problems of medicine than are interested today. You say to me; do you want me to become a medical politician? What is politics? One of the best definitions of politics is, "politics is the study of ideal social organization" (not the art and science of capturing and keeping office). With this definition I ask you all to become medical politicians. Remember that you are a citizen as well as a physician.

In closing I should like to quote a verse from the dedication of Thomas Fuller's, *Holy Wars*; "It is the bounden duty of a man to better his heritage of birth and fortune and what the father found glass and made crystal the son should find crystal and make pearl."

## THE ADVANCEMENT OF LEARNING IN MEDICINE\*

WILLIAM J. MAYO, M.D.

ROCHESTER, MINNESOTA

If we turn back to the scant historical records of ancient Egyptian civilizations, Egyptian from the geographic rather than from the racial standpoint, because men of many races from the Near East groped for knowledge in Egypt, we find that in 10,000 years there were no less than eight complete relapses into barbarism. As one after another of these ancient civilizations have been uncovered from the sands of time, much of interest to early medicine has been revealed, but little of distinct value applicable to present-day methods employed in medicine.

In the days of the Ancients the dangers man

\*Read before the Research Club of the University of Illinois, Chicago, December 14, 1927.



could see with the unaided eye were those of large dimensions, wild animals, serpents, and tempests, relief from which lay in physical action. The dangers which were not visible were considered visitations of unfriendly spirits, and from them the people prayed to their gods for relief. Occultism, the mother of cults, was rampant. Belief in fairies, ghosts, spirits, gods, and devils was the forerunner of belief in the reincarnation of the dead, and communication with the departed, exemplified in the modern spiritualistic seances. The various cults come and go as the frauds of the old are discovered and replaced by the frauds of the new, always with appeal to the emotions and prejudices of the unenlightened.

The early history of scientific medicine was greatly influenced by Greece, because Greece contained maritime ports which enabled all the evidences of early civilizations to be brought to her doors.

Is it any wonder that Aristotle, the Greek (B. C. 384-322), the first of the great physicians, the tutor and medical adviser of Alexander the Great (B. C. 356-323), should be looked on as the originator, one might say, of medical science? On the death of Alexander his empire of the then known world resolved into various fragments, and Egypt and the Near East, which had given through the Phoenicians the alphabet and through the Babylonians the sidereal year, under the Ptolemies collected from the known civilizations a great library and museum in the city named for Alexander on the Mediterranean delta of the Nile.

We think of the Ptolemies who ruled Egypt for 300 years chiefly for the last of their ill-fated line, Cleopatra, whom Shakespeare immortalized in his great drama, "Anthony and Cleopatra," but let us not forget their service to science. It was in Alexandria that the students of Aristotle in the Ptolemaic school of learning gave to the world *scientific methods* based on original investigations, the gathering of facts at first hand and relating them with natural phenomena. Is it remarkable that this beginning of scientific methods from which true knowledge sprang should have controlled scientific thought for 2,000 years?

Men in every age, in times of spiritual or material stress, have risen to saving intellectual

heights, far above the level of their environment. Such a man was Abelard, the dialectic philosopher of the twelfth century, who perhaps has been best known through the great human tragedy of Abelard and Héloise.

The dark ages which were precipitated by the downfall of the Western Roman Empire, began to lighten in the twelfth century, as manifested by an emotional awakening for which the crusades were largely responsible. The crusaders on their return from the East brought with them the knowledge of the ancient philosophers which fortunately although submerged had not been completely lost. Abelard, Lombard, and other men of the time were leaders of this resurrection of thought and staunchly proclaimed the dictum that *understanding* is essential to belief, in contradistinction to the controlling ecclesiastic concept that *belief* is essential to understanding. Their teachings were those of Aristotle, modified to apply to Latin conditions.

From the intellectual controversies of the times sprang the University of Paris under William of Champeaux, founded in the first decade of the twelfth century, to be followed by Oxford University in 1210 and Cambridge University in 1231, the first evidences of systematic education in medieval times.

The sixteenth century was pregnant with new developments. It was the great Elizabethan age, the age of Shakespeare (1564-1616) and Francis Bacon (1561-1626), who gave to the world inductive logic which, paralleling deductive logic, introduced experimentation and developed scientific imagination, the building of images to be compared with facts that were known.

It was in this period that William Harvey (1578-1675), physician to Bacon, the father of physiology, lived and worked. We think of Harvey as the discoverer of the circulation of the blood, but his work went away beyond the discovery of isolated facts. He was an anatomist as well as a physiologist and his description of the heart and pericardium is a classic.

It should not be forgotten that contemporaries of Harvey were John Mayow, the first of the physician-chemists, whose work led to the discovery of oxygen, and Sydenham, the master clinician.

From this fertile age came the first crude form of the microscope, introduced by the Jannsen brothers in 1590, the most significant scientific

contribution of all time, destined to change the history of mankind.

From the time of Harvey it was nearly 200 years to that of John Hunter (1728-1793), who organized the knowledge of pathology. Hunter became an anatomist and a physiologist, and, for the first time in the world's history, correlated and related the isolated facts of scientific medicine into a coherent whole. The Hunterian Museum of the Royal College of Surgeons of London, with its thousands of specimens prepared and labeled in black by John Hunter's own hands testifies to his industry and scientific imagination.

William Hunter, the elder brother of John Hunter, was a physiologist and anatomist of distinction. Many of his almost forgotten contributions to science have proved to have been made with the vision of the prophet. While the great chyle vessels were known, it was William and John Hunter, who first described the lymphatic system and traced its minute subdivisions. The Hunters in their dissections had the incomparable advantage of a crude form of microscope and the hand magnifying glass which enabled them to follow the course of injections of dyes into vascular and lymph channels. Belchier, of Guy's Hospital, in 1764 had introduced madder dye for this purpose.

Pasteur (1822-1895) and Lister (1827-1912) may well be considered together. With the advantage of improved microscopes and the development of staining and cultural methods Pasteur, of France, proved his theory of the origin of disease in microorganisms and changed the whole aspect of medicine. Lister, of England, related microorganisms to infections and putrefactive processes and developed methods of prevention which were to be the greatest gift made by man to surgery. Owing to these discoveries, hospitals for the first time became safe. Previously suppuration and gangrenes had caused so ghastly a mortality that patients were safer operated on in the forest than in the hospital.

As one considers the pioneers in medicine one recognizes in Aristotle the development of knowledge through scientific methods; in Harvey the foundation of physiology and anatomy; in Hunter the correlation of the basic sciences in relation to medicine; in Pasteur the determination of microorganisms as the cause of disease; in

Lister the sound application of the new knowledge to the cure and prevention of diseases of man.

These heroic men whose life work marked epochs in medicine we think of as individuals, but what they accomplished singly was perhaps of less importance than the inspiration they gave to the group of men who followed them.

It has been well said that physical man has been studied from the dawn of history, not for love of science, but because of fear of death, in an endeavor engendered by fear to understand the causes of death that they might be obviated.

Charles Darwin (1808-1892), in that remarkable series of deductions to be found in his "Origin of Species," laid the foundation for the practical study of evolution through investigations of embryology and comparative anatomy.

The basis for science in medicine fundamentally is anatomy. Physiologic requirement is the architect, but anatomy is the master builder, and the evolution of physiology must be studied in anatomy, embryology, and comparative anatomy.

Up to the time of William Sharpey, an English anatomist (1802-1880), anatomy and physiology were taught together. Elliot Smith well says that it was a misfortune that the students of this splendid anatomist separated physiology from gross anatomy and carried microscopic morphology into the teaching of physiology. Merely that the anatomical picture was microscopic did not justify separation of cause and effect.

To Virchow and his school through the cell theory we owe a newer and better understanding of anatomy and physiology, although Virchow developed his theory from that perverted physiology which he called cellular pathology. The greater part of this new knowledge came from the study of material obtained at necropsy. However, while dead-house pathology gave an enormous amount of knowledge, it did not lead to rapid improvement in therapeutics. The physical changes resulting from terminal causes such as infections so often obscured the early disease manifestations that postmortem study gave little understanding of the disease in its curable stages. Interpretation of pathology of the living is the outstanding feature of modern medicine.

*Visual methods.* The cerebrum of man was built up coincidentally with the eye, and it is this fact, not the mechanics of the eye, that has



made intellectual progress possible. In the lower vertebrates an expanded olfactory ganglion was the forerunner of the cerebrum, and the sense of smell not only controlled their behavior, but remains in the lower animals the only special sense which is not relayed through intermediate ganglia. The great expansion of the cerebrum in man, however, completely overthrew the dominance of the olfactory sense, giving control to vision, and established direct relationship with consciousness, thereby governing behavior.

Nevertheless, the sense of smell, by reason of its direct connection with the cerebrum, remains, even in man, the most delicate of all the special senses, being able to detect with marvelous accuracy colloidal and molecular substances suspended in the air as gases and vapors beyond the possibility of detection by artificial means. The senses of hearing, taste, and touch are secondary in that they reach consciousness indirectly, and only when trained by the eye do they attain perfection.

The mind of man is therefore a visual mind. The outstanding fact in the history of medicine is that the visual method of obtaining information has been dominant. To make visible the unseen in physics and chemistry is the task of scientific medicine.

Bayliss well says that there is no dividing line between physics and chemistry; that only under certain physical conditions can there take place the atomic inter-change in the molecule called chemistry.

The unit of life is no longer the cell, but the ultramicroscopic entities called colloids, lying between the microscopic limit of  $1/10$  micron or  $1/250,000$  inch in diameter and  $1/1000$  micron or  $1/25,000,000$  inch in diameter.

Our knowledge of these ultramicroscopic structures dates back to the early period of the nineteenth century and is due largely to three men. Brown (1773-1858), the English botanist, in 1827 pointed out that when a pencil of light was thrown into a dark room there would be seen in rapid oscillation certain motes of light of which there was no other physical evidence, and that this phenomenon could also be seen with the microscope in certain fluids. The dancing motions of these light motes were called the Brownian movements. Dalton (1766-1844), working at the same period with so little scientific apparatus as to be one of the wonders of the scientific

world, propounded his atomic theory, and in connection with his work the vibratory movements of the particles first observed by Brown were given the name of "the dance of the molecules."

It was not until 1861, however, that the real significance of these motes of light was elucidated by Thomas Graham (1805-1869), Master of the Mint in London. Graham conceived the idea that these light motes were reflections of minute bodies which, while invisible, were larger than a ray of light, and so acted as mirrors to reflect the light. The rays of light travel 186,000 miles a second, but when refracted or reflected by an object their speed and length are changed and the rays become manifest as colors in the lines of the spectrum. The longest ray appears to the retina as red, and in order of the length and speed of the rays, orange, yellow, green, blue, and violet are seen. On the relative length of these rays is based the colorimetric system which today plays a most important part in the newer medicine. The ultraviolet ray, which is too rapid to be detected by the eye, stimulates physiologic activity, whereas those vibratory rays which are longer and slower than the red give rise to heat.

Graham further observed that these minute bodies which reflected light would not pass through parchment paper, nor form clear solutions. Because these bodies in the mass felt sticky, owing to their enormous surface tension, they were given the name of "colloids," a Greek term meaning glue. Graham also noted that certain other substances, such as the crystalloids, for instance, sugar and salt, which would pass through parchment, formed clear solutions. The crystalloids, representing the molecular constituents, were smaller than the ray of light, and therefore, did not refract light. These experiments in a general way gave the early boundaries of the molecular field.

Scientific application of these methods, using the x-ray, which is only  $1/100,000,000$  inch in vibratory length, permitted the examination of the atom itself and led to the discovery of the electron and the proton. The proton is the positive nucleus of the atom around which the electron revolves in rapid motion. It was Moseley, that brilliant young Englishman, who lost his life in the Gallipoli campaign at the early age of twenty-eight, who saw the significance of these

facts and who showed that there were ninety-two possible elements between hydrogen, the lightest, and uranium, the heaviest, and that between each two elements in the progression of atomic weight there was approximately the weight of one or more atoms of hydrogen. Wherever there was a gap a new element would be discovered; all but two of the elements are now known.

The actual exchange of electrons and protons in the atom alters the constitution of the molecule, and upon this alteration life depends.

*Biochemical Methods.* Heat and energy to drive the human machine depend on oxidation, the union of oxygen with other elements. The hydrogen activation theory of Wieland is perhaps the best explanation of the process of oxidation. The great source of energy for the human body is carbon, in which the heat of the sun is stored through the agency of the mechanism furnished by chlorophyll, the green coloring matter of plants. When the carbon is oxidized, the carbon dioxid ( $\text{CO}_2$ ) which represents the ash, is eliminated by the lungs.

The power of the sun which is used in breaking up molecular compounds containing hydrogen remains latent in the hydrogen atom, and when this power is released by oxidation, which rebuilds the hydrogen molecule, heat and energy are available for vital needs. The ashes of this section, if one may so speak, are represented by water ( $\text{H}_2\text{O}$ ).

Life is a struggle for food, and changes in the habits and in the form of all animals are adaptations for the purpose of obtaining food.

Foods are classified in three groups: carbohydrates, fats, and proteins, and all contain carbon, hydrogen, and oxygen. The higher the oxygen content, the more rapid the oxidation. The fats (glycerin stearate,  $\text{C}_{57}\text{H}_{112}\text{O}_6$ ), have a higher oxidizable molecular content, and therefore more heat and energy, than carbohydrates, represented by glucose sugar ( $\text{C}_6\text{H}_{12}\text{O}_6$ ), but burn more slowly because of a relatively lower oxygen content. In addition to the carbon, hydrogen, and oxygen, the proteins contain nitrogen, which gives form to the tissues by permitting the deposition of other elements, such as calcium and phosphates, and a little sulphur. The nitrogen is not combustible and when it has served its purpose it is thrown out of the body as urea, an ash, which if present in excess in the blood has grave consequences.

Kendall has shown that an atom of sulphur in the catalyst acts as a thermostat which holds the heat of the body at  $37^\circ \text{C}$ . A pound of sugar burned outside the body will produce the same amount of heat as a pound of sugar burned inside the body, but only at a temperature above  $400^\circ \text{C}$ .

The essential alkalinity of the bodily tissues is slight. This alkalinity has been compared to the difference between tap water and distilled water, and at that, distilled water must be fresh or it would absorb sufficient acid from the carbon dioxid in the atmosphere to upset the alkali acid balance. An excess of alkali in the blood, called alkalosis, is now known to have as serious effect as diminution of alkali, badly named acidosis, because an acid reaction in the blood is incompatible with life.

Among the constituents necessary to life are salt and iodine. These two elements are a heritage from the water vertebrates. Iodine, like salt, is soluble and easily washed out of the soil, and is closely concerned with vital metabolic changes. The discovery of thyroxine by Kendall gave not only insight into but a tremendous impetus to the successful management of goiter.

Seventy-five per cent of the body weight is due to water. There is as much water in the muscles as there is in the blood, but in a different colloidal combination.

Carbohydrates, fats, and proteins in a molecular form are carried in the bloodstream. The arterial blood contains 18.5 per cent by volume of oxygen. Krogh and Haldane have shown that in man at rest, each cavity of the heart expels about 4 liters of blood a minute. During violent exertion, to supply the necessary amount of oxygen to the tissues, the entire volume of blood passes through the heart and around the body every ten seconds, and the amount expelled by the heart each minute is increased from 4 to 24 liters.

Krogh showed also that during the systole of the heart there is sufficient dilatation of the arterial capillaries to open tiny ostia which permit the escape into the tissues of molecular food products with the oxygen. The extraction of the heat and energy is the function of the tissue colloids and the negative pressure in the veins draws the carbon dioxid into the venous channels for elimination through the lungs. In shock,



sufficient dilatation of these ostia permits the blood colloids to pass out into the tissues.

Examinations of the secretions upon which sole reliance formerly was placed are now aided by examinations of the blood. The estimation of the blood sugar helps us to understand not only diabetes but also the relation of shock to subnormal blood sugar content. Nurmi at the end of his long distance runs had a normal blood sugar, whereas those who dropped out of the race had greatly reduced blood sugar. The estimation of the blood urea is no longer guess work, but an accurate estimation of kidney function and is a guide to elimination of toxic substances. Creatinin estimations have their prognostic value. Through determinations of the blood chlorids and the carbon dioxide we get a clue to baffling conditions which formerly led to death.

All of these estimations either directly or indirectly concern vision. The discovery of the aniline dyes by Perkin (1838-1907) led to a great advance in medicine, because the mass of molecular and colloidal particles of the dye is readily recognized by the eye. Rowntree and Geraghty made a splendid contribution to accuracy in medicine by finding that the molecule of the dye, phenolsulphonephthalein is the same size as that of urea and that it is eliminated through the kidneys in the same way. Visual methods of detection and measurement are now available. By further experimentation Rowntree found that the dye, phenoltetrachlorphthalein, when injected into the bloodstream is eliminated entirely through the bile. Later Rosenthal from this fact developed a valuable method of estimation of liver function. Graham and Cole have utilized Rowntree's original discovery to develop cholecystography, working first with phenoltetrachlorphthalein, which in the gallbladder gave a faint shadow under the x-ray, later with the corresponding iodine, and finally with the bromine substitution product of phenoltetrachlorphthalein.

Photography has enabled the eye to examine at leisure the phenomenon of motion in the ultramicroscopic field. One twelve-millionth of a second is sufficient to make a photograph which will show a bullet in flight at a muzzle velocity of 3,000 feet a second as though it were standing still.

All these are examples of our ability to analyze

the individual in his vital processes as we would analyze in the test tube.

The past generation solved the problem of communicable and infectious diseases, largely those of the first half of life. The present generations are solving the problem of the premature deaths of middle and later life caused by diseases of the heart, the lungs, kidneys, and nervous system, and cancer, the age-long enemy of man, is on its way to defeat.

The future of medicine depends on further study of biologic phenomena in the ultramicroscopic field of research.

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## A TUBERCULOSIS INSTITUTE OR WHAT

P. R. BLODGETT, M.D.

CHICAGO HEIGHTS, ILLINOIS

In the October 29, 1927, issue of the *Journal A. M. A.*, under the caption of News Items for Chicago, appeared an article which stated that the Chicago Tuberculosis Institute had just completed an examination of the students in one of Chicago's junior high schools. This narration of achievement sought to impress upon the reader the fact that these examinations were made by trained and registered nurses from the staff of the Institute. In the course of their examinations these very competent nurses found almost everything but venereal diseases; apparently a study of these conditions had been overlooked during their training period. This was truly a wonderful accomplishment and deserved special mention.

I read this article with a great deal of interest. I marveled at the amazing amount of medical knowledge that these young women have accumulated in their short period of nursing training. I marveled also at the asinine stupidity of a school board, more interested in shooting John Bull than in the education of the children, who sanctioned and aided in the conducting of this farce in the guise of complete physical examinations. It is apparent that neither the Chicago Tuberculosis Institute or the school board has any regard for the provisions of the Medical Practice Act of the State of Illinois.

The Chicago Tuberculosis Institute has an insatiable desire to ingratiate itself, by one means or another, into the good graces of the community, always at the expense of private prac-

tice. At the present time, in the City of Chicago Heights, it is trying to ease itself into a position of directing and conducting the examinations of children about to enter school for the first time. This pseudo-charity organization is intent upon the establishment of free clinics, not for the poor, which the profession has always taken care of, but for all who come. The very apparent aim of this mis-conceived organization is to make the office of the Chicago Tuberculosis Institute, not the Doctor's office, the health center of the community.

About a year and a half ago I attended, as a member of a committee from our Branch of the Chicago Medical Society, one of the pediatric clinics conducted by the Chicago Tuberculosis Institute. Every woman who brought her child to that clinic had the examination made, and was given advice, free of any charge. Not one legitimate charity case presented itself on that day. Before the clinic period was over, a well dressed woman entered with her baby, the chauffeur waited a short distance away while the worthy act of dispensing charity took place. After the pediatrician had completed his examination and had advised the poor mother when and what and how to feed her offspring, she informed him that a few days before she had gone to Dr. ——— and that he had given her an entirely different procedure to follow. The woman was immediately informed that it was foolish for her to take the child to her doctor and then come to the clinic, that the thing to do was to take her child to one place or the other. He dismissed her with the invitation to return to the clinic in a month and in the meantime to follow his instructions. The man who conducted this clinic called himself a specialist, but the Chicago Medical Blue Book did not list him as a member of any professional society.

The orthopedic clinic conducted by the Chicago Tuberculosis Institute, in conjunction with the Rotary Club, was being operated along identically the same lines. On the day that our committee visited the clinic, we found that it was not being conducted for the poor but for all who came; many people of considerable wealth brought their children with orthopedic defects to receive charity at this clinic. The orthopedic surgeon in charge of the clinic told the committee that it was unnecessary to confine the work

to charity cases, that it was the desire of those most interested to build up a large clinic and make a fine showing.

For a few hours, on one day a month, a chest clinic is conducted by a clinician from the staff of the organization at the "Health Center." This is the tuberculosis clinic of the Chicago Tuberculosis Institute. The nurses have very little time available, and a little of that is given to tuberculosis nursing. After all, not so much is necessary as practically all save ambulatory cases are in either private or in county sanitariums. So much for tuberculosis. As is usually the case he who is continually seeking credit for what has been done has done very little to get credit for.

The local school board in Chicago Heights, contrary to the laws of the State of Illinois, pays into the coffers of this private charity organization \$1,000.00 a year, in return for which a nurse is provided during the school year. The school nurse is an employee of the Chicago Tuberculosis Institute. This nurse is very competent, she has an amazing amount of medical knowledge, she makes diagnoses of all communicable diseases, cases of heart disease, tuberculosis, twisted spines, "game" legs, bad tonsils and bad teeth. Yes sir, she finds 'em. Those undernourished children must go to the "Health Center" for examination, not to the Doctor's office; he doesn't run a clinic.

The Chicago Tuberculosis Institute never stops in its effort to pauperize those who should take care of themselves. Surgical cases are not to be overlooked. Major surgery is directed where the cases are handled at from \$25.00 to how much have you got. Big League Stuff. They don't seem to care so much for major surgery, tonsils is what they like. Show one of those nurses a big pair of tonsils still in the throat. Her face will light up and she will begin to radiate that same joyful feeling that comes over a hungry cat when he skates up to a pan of warm milk. Bargain-hunting adults and all children, unless their parents object, are hurried to the dispensaries of the medical schools or to the charity wards of the large Chicago hospitals; here the tonsils and adenoids are removed at from \$5.00 to \$7.50, costs more for adults. One of my confreres in a neighboring city recited an incident to me the other day which was in keep-



ing with my own observations. He told me of a woman of prominence and social standing in his community whose husband held a very lucrative position in a large corporation, who came to his office and said: "Doctor, I want you to take a look at Mary's throat. See if her tonsils need to come out." The examination disclosed that the child had infected tonsils that should be removed. The woman paid the doctor his fee of \$2.00 and said that she only wanted to know whether the little girl had bad tonsils or not. As she arose to leave, she said: "About a year ago the nurse from the C. T. I. took little Johnnie to Chicago and had his tonsils taken out. The bill for the doctor, the anesthetic, the hospital and everything was only \$5.00. *It's such a bargain* I'm going to have the nurse take Mary to the same place and have her tonsils taken out." A union carpenter, who does so much for nothing, had his tonsils removed for \$7.50. An insurance broker, who maintains an office in the loop in Chicago, who owns his own home and two flat buildings, was an object of charity in the eyes of a Chicago Tuberculosis Institute nurse working in the northern part of Cook County, and his child's tonsils were removed for \$5.00. I won't burden you with any more of these cases now. I want you to appreciate with me that all cases to these professional charity nurses, they all get their money, are poor and are entitled to free medical care.

The Municipal Tuberculosis Sanitarium, the Cook County Hospital and the Oak Forest Sanitarium are all supported by the taxpayers. The Municipal Tuberculosis Sanitarium is charged by law with the supervision of the public health angle of tuberculosis and the care of indigent cases, this is supplied through the dispensaries which it maintains and its sanitarium, the Cook County Hospital and the Oak Forest Sanitarium are also available. In the City of Chicago, the Chicago Tuberculosis Institute does no tuberculosis work, it's a good thing they are free to conduct these examinations in the schools. The Chicago Tuberculosis Institute functions as a tuberculosis organization in the outlying districts of Cook County, and not very much there. I believe that I am perfectly safe in saying that every physician in general practice does more in his community for the care and prevention of tuberculosis than does the Chicago Tuberculosis

Institute in that community. I am just as sure that the profession does more along these lines than all other organizations in Cook County.

The Chicago Tuberculosis Institute has become very much exercised over the signs of growth manifested by the Cook County organization directed by Dr. Herbert L. Wright, the County Health Officer, who hasn't a license to practice medicine in the State of Illinois. It seems a pity that there is so much "bad blood" between these two organizations, both marching under the banner of sweet charity. The reason for this is that both have taken the attitude that the health of the community rests in their hands. They like each other just like a couple of stray bull dogs. Too bad.

The Chicago Tuberculosis Institute is not an organization strictly adhering to its publicly avowed purpose of combating tuberculosis, inasmuch as it expends far more of its time and its resources in the establishment of numerous clinics, social service activities, and general public work, the greater part of which there is no necessity for, than it does in the control of tuberculosis. The Chicago Tuberculosis Institute plays a very small part in the real work of the prevention and the cure of tuberculosis in Cook County. The inference which its name carries, that the Chicago Tuberculosis Institute is the great Cook County champion in the fight against tuberculosis, is a pernicious lie, which seeks to belittle the work of greater forces. The Chicago Tuberculosis Institute is the recipient of the proceeds from the sale of Christmas Stamps (Red Cross Seals) for the entire county; this diversion of funds, given to aid in the fight against tuberculosis, to the coffers of a private charity organization, is a most vicious fraud perpetrated against the people of Cook County in their whole-hearted spirit of Christmas giving. Then there is always another source of revenue that organizations of this type do not overlook; it is those public spirited individuals who are gifted with a soft head and a big pocket book. It looks more like a confidence game to me than it does a tuberculosis institute.

The members of the profession who are practicing outside of Chicago in Cook County are still doctors in their respective communities. They practice in cities and towns which have not yet been strangled by professional charity or-

ganizations. They are out on the firing line making a determined stand for decent medical practice against wealthy organized charity and against the unfair competition of the schools that graduated them. In that part of Cook County which lies outside the corporate limits of the City of Chicago, the greatest menace to the practice of medicine by the individual physician is the Chicago Tuberculosis Institute.

## PRIMARY MALIGNANT TUMORS OF THE NECK AND THEIR TREATMENT\*

R. CARTER CRAIN, B.S., M.D.

Instructor in Surgery, Northwestern University Medical School

CHICAGO

We are all acquainted with the superficial malignant conditions in this region, such as basal cell carcinomas of the skin and those epitheliomas that sometimes follow the degeneration of certain types of moles, but the deep-seated primary malignant growths that occasionally arise here are less clearly understood. They include primary carcinomas and endotheliomas due to congenital defects; sarcomas and endotheliomas of the lymph nodes and cervical tissues; tumors of the submaxillary salivary gland, carotid body and thyroid gland. Such a definite grouping of neoplasms in this locality can be accepted only arbitrarily, as no consensus of opinion prevails among competent pathologists in regard to the true nature of the process in very case. Therefore, the subject is approached with due respect for divergent views.

The development of the neck takes place early in embryonic life. Soon after the enclosure of the foregut the pharyngeal membrane spreads downward between Seesel's pocket and the diverticulum of the hypophysis (Rathke's pouch) and widening laterally it shows four pharyngeal pouches.<sup>1</sup> Later a fifth pair develop. These four pairs of pouches form: (1) the Eustachian tube; (2) the palatine tonsils and supratonsillar fossae; (3) the thymus anlage, and (4) the parathyroids.

Between the pharyngeal pouches are the five branchial arches which are included in the construction of the jaw and hyoid bone; the thymus and thyroid glands; the styloid process and the stylohyoid ligaments, and some of the soft tissues of the neck. As the pharyngeal

pouches continue in their development they come into contact with the ectoderm of the branchial clefts, fuse with it, and form closing plates, so that normally at birth the neck presents a smooth surface.

Thus the structural anatomy is both complicated and vital. Of the several compartments the most important is the carotid triangle, which contains beneath the border of the sternocleidomastoid muscle and the deep cervical fascia, the carotid vessels, the internal jugular vein, the vagus, sympathetic, phrenic, hypoglossal and spinal accessory nerves, and important lymphatic channels.

One of the frequent sites for the beginning of some of these primary tumors is the medial superior deep cervical gland, at the level of the internal jugular vein where it is obliquely crossed by the posterior belly of the digastric muscle. This location is often termed the "critical point" of the neck, for here within a space of about 3 cm. arises the vascular supply to all the structures derived from the first five arches and at this point converge not only the greater part of their venous drainage, but what is more important, the lymphatic drainage also. Within this area is situated the main collecting station for the lymphatics derived from the external auditory meatus, the Eustachian tube, the nasopharynx, the tonsil, the tongue and the pyriform fossa.

The primary development of carcinoma of the neck was first observed by Langenbeck,<sup>2</sup> in 1861, who thought it was a vessel sheath tumor. Twenty years later Volkman<sup>3</sup> described the true nature of such growths, and mentioned three cases. He considered them to be epithelial remnants of branchial clefts, and named them branchiogenic carcinomas. His views on the origin of this variety of tumor have been generally accepted, although in the beginning Gutmann<sup>4</sup> and Gussenbauer<sup>5</sup> tried to disprove the theory.

If we accept Volkman's explanation, then it is easy to understand the production of tumors here and to picture instances in which, during the formation and fusion of the pharyngeal pouches and branchial clefts, defects of union might occur leading to the construction of cysts; or islands of epithelial tissue could become pinched off and displaced, and remain as small latent buds devoid of activity. Then under the influence of certain factors at present unknown

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proliferation takes place and a malignant tumor results.

A considerable number of branchiogenic carcinomas have been described in the literature and may be placed in two groups, those developed from pre-existing cysts and those developed from the vestigial remains of the clefts. In the former, the structure of the tumor is that of a squamous cell carcinoma, while the latter group comprising those tumors that have arisen in the pinched off discrete islands of epithelial tissue, closely resemble the mixed tumor type found in the salivary glands, and are considered by some pathologists as endotheliomas. On first thought it may sound illogical to ascribe to a common cause, tumors so diverse in structure, but when it is recalled that the wall of the branchial cleft consists not merely of a layer of epithelium, but also contains connective tissue and a well developed layer of lymphoid tissue, it is not surprising that more than one variety of tumor can be produced from it.

They begin as small rounded masses, situated in front of the anterior border of the sternocleidomastoid muscle, and between the great cornu of the hyoid bone and the angle of the mandible. As enlargement continues, extension may take place into the posterior triangle behind and the parotid gland above. Metastasis is late.

Perhaps the most frequent primary malignant invasion of the neck is sarcomatous in nature, and while the species is determined according to the prevailing type of cell, it is usually present as a round cell sarcoma or lymphosarcoma.

Round cell sarcoma may start in the lymph glands or connective tissue. Microscopically it is composed of little intercellular substance and the nuclei of the cells are always very conspicuous. Blood vessels are abundant, often appearing as mere channels between the cells; this accounts for the readiness with which the cells migrate by way of the blood stream. It is the most generalized tumor that affects the human body<sup>6</sup> and may occur at any age, arising in vestigial remains as well as in organs in the full exercise of their functions. It begins as a single nodule which rapidly invades the surroundings and metastasizes.

Lymphosarcoma, first clearly described by Kundrat,<sup>7</sup> consists of a more or less widespread growth arising from one or from a group of lymph glands, in which the small round cells are

contained in a delicate but definite reticulum formed by the branching processes of other cells. The tumor exhibits a characteristic structure. It occurs as a rule in very definite situations, one of which is the cervical gland area and presents special clinical features which consist of a creeping involvement of a chain of lymph glands until a large mass is formed, the separate members of which are matted together. In some respects it resembles normal lymphoid tissue but there is no trace of the architectural characteristics of a lymphatic gland. It differs from the small round cell sarcoma by having a delicate reticulum. It grows rapidly, bursts from the gland capsule and early infiltrates the adjacent tissue, becoming attached to the skin and soon ulcerating. Frequently the infiltration produces pressure symptoms or thrombi.

Endothelial tumors, in the strict sense, are those which are believed to be derived from lining cells of blood vessels, lymph vessels and serous cavities. Although this classification is disputed in some respects, nevertheless, according to Ewing,<sup>8</sup> two facts stand out: (1) the lining cells of the great body cavities, as the pleura, pericardium, etc., are derived embryologically from the cells forming the coelomic cavity after the splitting of the mesoderm; (2) the lining cells of blood vessels and lymph vessels are derived from mesoderm and are closely related to connective tissue. Their position is, therefore, intermediate between epithelium and connective tissue and they possess to a certain degree, the tendencies of each.

Primary endothelioma of the lymph glands was first described by Chambard,<sup>9</sup> in 1880, and a year later by Hoffmann and Schottelius,<sup>10</sup> who first used the term endothelioma. The nature of these tumors has now been generally accepted and many pathologists believe they are rather frequent in occurrence. Ewing describes them in early cases as being circumscribed with a free capsule resembling early tuberculosis, but later they become extremely hard, adherent and multiple. The infiltration of the surroundings is compressive and destructive as in carcinoma, although the progress is much slower than in epithelial growths. Very extensive fibrosis takes place late in the disease and often produces edema and dyspnea. Asphyxiation may occur. Early, the microscopical picture may resemble granulomatous inflammation. The cells are

large, elongated, or polyhedral, with very large vesicular nuclei and diminutive nucleoli and they spring from multiple foci from the lymphatic tissue.

Tumors of the sublingual salivary gland while not uncommon are far less frequent than those of the parotid. Controversy has long waged over this group, which includes carcinomas, sarcomas and the so-called mixed tumors.

Carcinomas develop rapidly, soon invading the whole gland, the capsule and regional lymph nodes. After extirpation recurrence is prompt.

Sarcomas are rarely seen, and except those originating in the reticulum cells of the lymph follicles of the gland have not been satisfactorily proved.

In the mixed type the most diverse views are held as to the true nature; those supporting the endothelial theory state that owing to the presence of both mesoblastic and epiblastic elements, the tumors must be of the nature of an embryona and thus derived from a germ cell. On the other hand, Ehrlich demonstrated that mucin-secreting cells of the tumor could produce mucoid connective tissue from which eventually by a process of metaplasia, cartilage may be formed.

The clinical course of these tumors varies. In some cases, after two or three years steady enlargement growth ceases. In others, gradual enlargement extends over a long period of years and the tumor attains considerable size, but if encapsulated, it may be safely removed. In still other cases, the tumors possess no capsule, invade surrounding structures and return after excision. The lymph glands are seldom involved unless excision has been followed by recurrence.

The carotid body measures about 1-2 mm. in diameter and lies at the bifurcation of the common carotid artery, slightly at the posterior side of the internal carotid, just as it leaves the main trunk. It is formed from the primitive vascular anlage<sup>11</sup>, from cells of epithelial type which become heaped up at this point and at first are continuous with those of the vessel wall. The resulting nodule is enclosed in adventitia and afterward, when capillary vessels derived from the common carotid enter the mass, it assumes a form not unlike a glomerulus.

The fact that tumors could be derived from this body was discovered by Marchand<sup>12</sup> in 1891, although nearly one hundred years earlier, Allen

Burns<sup>13</sup> mentioned having seen several cases that had the characteristics of an aneurism but which at operation proved to be tumor tissue attached to the carotid bifurcation. According to Marchand, they arise as a result of the proliferation of the cells of the gland. On the other hand, von Heinleth<sup>14</sup> considered them to be derived from the capillaries.

The growths are either lobular or lobulated; lobulation is common because of the location of the neoplasms, which during their development grow on either side of both the internal and external carotid arteries; also, the septa which penetrate the tumors tend to produce a lobulated condition. The tumor first appears as a small lump in the side of the neck at the level of the bifurcation of the vessels and partly under the sterno-cleido-mastoid muscle; as it enlarges, it becomes ovoid in shape with the long axis in the perpendicular plane and resembles a pigeon or goose egg. Jonathan Hutchinson called them "potato-like" tumors. They are movable laterally but not vertically. The consistency varies but is usually hard and elastic. Transmitted pulsation can be felt over the mass as well as a thrill; on auscultation, a bruit may be heard; however, there is no expansile pulsation as in aneurism.

On dissection the capsule appears fairly well defined and the external appearance resembles goiter, and may sometimes lead one to think he is dealing with an accessory thyroid. The color and abundant hemorrhage help to favor this view. On section the tissue is brownish and sponge-like, due to the chromaffin in the tumor cells and the abundance of blood vessels. Microscopically, penetrating bands of fibrous septa are seen, which contain both large and small blood vessels and take part in the production of the alveolar arrangement of the growth. The shape and size of the alveoli are not uniform but invariably they contain tumor cells which are large and polyhedral in shape. Operation is usually followed by recurrence as conclusively proved by Balfour<sup>15</sup> and Tinker<sup>16</sup>.

The thyroid gland may be the seat of either carcinoma or sarcoma and although either one may arise in an apparently normal gland, it usually develops in one already showing evidence of goiter. Tumors here have the peculiar tendency of forming metastatic areas in the



skeleton which are oftentimes composed of thyroid tissue instead of tumor cells.

The frequency of malignant invasion of this gland is variable. In Berne, 1 out of every 93 post mortems reveals malignant change; in the Mayo clinic the incidence is 1 in 297 cases operated on for thyroid disease.

Kocher<sup>17</sup> and Langhans<sup>18</sup> believe that they can distinguish several groups of these tumors, the most common of which consist of proliferating adenocarcinomas occurring as single nodules containing every transition between solid strands of cells and colloid containing alveoli, and a second group, called by Langhans "carcinomatous struma" which has the arrangement in irregular solid strands of epithelial cells. The latter type quickly burst through the capsule of the gland and metastasize abundantly. Crile<sup>19</sup> states that fully 95 per cent of growths here are carcinomas and that 90 per cent of them develop from fetal adenoma. Sarcomas, whose characteristics some pathologists will dispute, represent 5 per cent or less, and when found are usually of the round or spindle-cell variety.<sup>20</sup>

According to Wilson<sup>21</sup> correct early diagnosis of these tumors is made less frequently than of any malignant change involving any other organ in the body.

From a clinical standpoint, two facts present themselves: first, nodular masses in the gland are more suggestive of possible malignant degeneration than smooth enlargements; second, a sudden increase in rate of growth of a nodular thyroid should warn one of a possible beginning malignancy.

It is an unfortunate fact that the early symptoms of malignant disease of the neck are chiefly negative. The patient may be aware of a lump, but as long as it remains small and painless, there is faint likelihood of him consulting a physician. Later, as the mass enlarges, relief may be sought, but by this time the first stage of progress has usually passed and we are confronted with a more or less extensive tumor, poorly defined, densely indurated and painful—the well-developed second stage picture, which soon produces compression signs, emaciation and more pain and enters the third and last phase of the disease.

In making a differential diagnosis one should always examine the nose, oral cavity and ears; the larynx should be inspected with a mirror.

In this way, what sometimes appears to be a primary malignancy, will prove secondary to a newly discovered focus in the mucous membrane.

In early cases, when the tumor is smooth, round and circumscribed, it is necessary to exclude simple adenitis, tuberculosis, Hodgkin's disease, syphilis, lipoma, cyst and aneurism. In more advanced cases we must rule out actinomycosis and ligneous phlegmon.

The treatment depends upon the type and extent of the neoplasm. Either surgery or radium may be indicated alone or together.

As surgeons it is necessary to recognize the condition in the primary stage while the tumor is circumscribed. Only then can excision promise cure. Once the process has invaded the surrounding cellular tissues and provoked phenomena of compression, palliation alone remains.

In localized cases the best results are obtained with surgery and radium in combination. With the exception of lymphosarcoma, where the knife certainly holds no authority, I believe that the imbedding of radium needles at the time of operation followed by external applications of heavily screened radium over the whole area of the neck, as well as the field of excision, offers the only reasonable hope of permanent relief.

It is a well known fact that some types of tumors are more easily affected by radiation than others. This has given rise to the idea that the gamma ray exerts a selective action on certain tissues. Such conclusions are misleading. All types of cells are affected by radiation if the dose is sufficiently large. The picture is better described as one of differential action. In general, tumors derived from embryonal cells and retaining embryonal characters are more susceptible to radiation than tumors derived from adult cells and reproducing adult cell types.

In the more resistant growths I believe intratumoral radiation is always the method of choice for the following reasons: (1) Kepler's law states that the amount of energy received at any point varies inversely as the square of the distance. (2) To deliver a sufficient intensity of radiation to an area beneath the skin might require more energy than the skin can tolerate, and the result would be a destruction of the cutis with undesirable ulceration. (3) By imbedding the radium in the growth itself, the damage to the skin is negligible and the tumor receives 100 per cent of the energy.

Broadly, indurated tumor masses offer no promise of permanent cure with radium, although the progress of extension may be arrested for a variable length of time.

Lymphosarcomas, if diagnosed early and no attempt is made toward excision, occasionally may be arrested for several years. This type of tumor cell offers less resistance to radiation than any other. To witness a mass 5 cm. in diameter disappear in 96 hours is not a miracle but an actual fact. Following the treatment of the local area the surrounding lymphatic channels should likewise be covered. If no metastases appear in the deep organs in a year, I consider the prognosis favorable.

Advanced cases, presenting marked deformity and pain as well as pressure signs, which include dysphagia, hoarseness, tinnitus, edema of the head and lockjaw, are pitiful aspects. Such patients are beyond the realm of surgery, but may receive prompt benefit from radium. After treatment, the continual pain disappears; the edema melts away; the voice improves; the dysphagia is forgotten; and the jaws regain their previous mobility. Although such miraculous improvement is only temporary, it must be admitted that something worth while has been done in the patient's behalf. Life has been prolonged and suffering relieved.

25 East Washington St.

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#### DISCUSSION

Dr. John Wolfer, Chicago: The subject that Dr. Crain has presented is of interest to me personally for two or three reasons: First, I think we are all interested in the differential diagnosis of tumors of the neck. We all know the multiplicity of types of tumors of the neck and, as he has very tersely stated, if we hope to relieve these cases by surgical means, we must diagnose the malignant tumor early. We know how loath people are to come to the physician when they have a small tumor mass in the neck but when it begins to grow and spread, then they seek counsel and for them counsel is often too late, so far as surgery is concerned.

There are a number of factors which appeal to me personally that I would like to just rehash for the moment. There is one type of tumor that he stresses; that is, carcinoma which arises from the branchial cleft. It has been my privilege to have dissected out a number of branchial fistulae. An interesting thing is some of these extend up to the fossa well back of the nasal pharynx; some attach themselves to the cervical process. I recall distinctly one in which a very hard indurated, irregular, nodular tract was dissected which was attached to the transverse process of one of the cervical vertebrae. In this tract we could find all sorts of embryonic tissue and cartilage; we could find structures that we did not know just exactly what they were. They were not typical epithelial cells. We could not interpret them as ends or endothelial cells. When you look at these specimens microscopically, you can picture what might happen in some of these cases as the starting point of tumor, either of the endothelial type as endothelioma, or as carcinoma or probably other tumors such as chondroma.

As far as the carotid body is concerned, when we study the histology of the gland, I believe the tumors may be of several types. The carotid body belongs to the chromaffin system. There has been described recently—I had the privilege of presenting this before the Chicago Surgical Society some years ago—a peculiar type of tumor which arises from the chromaffin system. Microscopically, this tumor looks not unlike a carcinoma, that is, you have alveoli filled with cells which look not unlike carcinomatous cells, yet are not carcinoma cells. In this class of tumors, you find many small capillaries among the tumor cells. The arrangement of the cells is peculiar, in that the nucleus is at the wrong end of the cell-lumen-wards. If you institute differential staining, you will find these tumor cells reduce silver. Probably the best way in which one can identify these cells is by the silver impregnation method. This tumor, as I say, looks like a malignant tumor. We found in the tumor which I studied, that the cells had broken into the veins, yet this was a benign tumor. The tumor I speak of was not of the carotid body but a tumor removed from the duodenum. The tumor was removed some 23 years and the patient is still well, without any recurrence of symptoms. I think this type of tumor when found in the carotid



body has been diagnosed as a carcinoma or endothelioma.

One other point, and that is in regard to the excision of the carotid body tumor. Due to its fixation to the vessels, it necessitates at times the removal of the carotid artery. Theoretically, if we ligate the internal carotid, we should have a hemiplegia. I would like to ask if any one has had any definite experience in which the internal carotid artery has been cut and in which the patient did not suffer serious brain changes.

Dr. L. Seed, Chicago: Dr. Wolfer asked about the carotid body tumor and ligation of the internal carotid. We had one at the University of Illinois three months ago in which a diagnosis of aneurism had been made and ligation of the external carotid had been done elsewhere. The tumor had persisted, projected into the pharynx producing severe hemorrhage once, and was causing difficulty in swallowing and in breathing. A diagnosis was made in the dispensary of either an aneurism or hard fibroma. I was of the impression that it was a fibroma of the pharynx. Operation was performed by an incision from the outside. At the time of operation it appeared from the outside to be more probably an aneurism and I deliberately ligated the external carotid, then the internal carotid and of the external carotid, the internal carotid and of course at the same time the internal jugular vein. The patient also had general paresis. Three months after operation he was returned to the neurologic department but no symptoms referable to the ligation of the internal carotid were found.

In the war, it was found that if the internal jugular vein is ligated at the same time as the internal carotid is ligated, the incidence of the cerebral symptoms is cut down enormously. I would like to add one thing: We have followed the principle that every lump in the neck should have a biopsy before a definite diagnosis is made. This spring we thought our diagnostic ability was competent without a biopsy and in two cases made a diagnosis of T. B. glands of the neck without removing a piece for microscopic examination. Later, one of the group of glands proved to be a neuroma and the other Hodgkin's disease in a child of seven years of age. So we insist that no diagnosis be made of tumors in the neck, which are at all questionable until a biopsy has been performed.

Dr. Wolfer (in response): The reason I brought this up is that I got into an argument with Dr. Loyal Davis, our neurological surgeon, on this topic. He said, if you ligate the internal carotid artery, brain symptoms must follow; that there was no doubt about it, because the vessels are terminal vessels and there is no question but that a hemiplegia will follow. It has been my experience that you can ligate the internal carotid and the patient will not invariably develop a hemiplegia.

Dr. J. R. Harger, Chicago: It has been my fortune to watch Dr. Crain's work. Suffice it to say, diagnosis of these tumors is usually not made until after they are removed in section or some part of them, except in those cases where the growth is extensive and the third or advanced stage has been reached.

I have had experience with four of these tumors. In each instance they had been cut into and not cut out before they came under my observation. The last one forms the basis for Dr. Crain's paper.

The first three cases that came under my observation went on to a fatal termination very promptly with marked ulcers about the neck after the tumor had been cut into. In the last case the extension of the growth caused the ear to stand out, and the patient had all the symptoms that Dr. Crain spoke of. Suffice it to say, when the radium was applied, this man's condition improved remarkably. His tumor disappeared and, while we do not anticipate a cure, we certainly have made him far more comfortable and his life more endurable, and I am sure prolonged his existence by the use of radium.

Dr. Bettman: Were they carotid body tumors?

Dr. Harger: No, it was an endothelioma of the neck.

Dr. E. P. Coleman, Canton: I might add one case of gunshot wound in the neck, with ligation of the internal carotid artery, and no symptoms.

## THE VALUE OF THE FLUOROSCOPE IN SURGICAL MANIPULATIONS\*

V. R. STEPHENS, M.D., F.A.C.S.

BERWYN, ILLINOIS

In attempting to discuss a subject of this sort one must apologize at the onset for undertaking a theme which must necessarily involve a variety of pathologic conditions, not at all related except that they lend themselves favorably to the discussion of the topic at hand. We are not particularly interested in the stereoscopic fluoroscope, or the monocular cryptoscope, or in any other special device which is not practical or available for use in the ordinary outfit by the average surgeon or the general practitioner. But we are chiefly concerned as to how the fluoroscope can be used to advantage in some of the common problems in everyday practice. If one has access to an outfit equipped for both upright and horizontal positions he may get along very well, but a tilting table and an arrangement for a lateral horizontal examination offers some further advantages. Our discussion then is to be chiefly directed toward interesting the practitioner in the fluoroscope as an aid in treatment. In some cases it may be of sufficient aid to transform a major surgical procedure into a minor operation. To illustrate the value of this method allow me to present a few cases from the clinic of the Berwyn Medical Unit.

\*Read before the Section on Radiology, Illinois, State Medical Society, Moline, Illinois, May 31, 1927.

D. M., aged 3 months, was brought to the clinic with a second attack of acute ileocecal intussusception, the diagnosis being made by the mother because of a similar attack three months before. This previous attack was unusual in that there was no colicky pain accompanying it, and has been previously reported. The case had been treated by laparotomy in the usual manner and we were now confronted with another major operation much to my chagrin, and the mother's disheartenment. On examination a sausage-like tumor was palpated just under the liver, reaching from above the umbilicus to the right lower quadrant of the abdomen. A few drops of blood were oozing from the anus and there was plenty of colicky pain by the time we saw the patient. It was decided to give a barium enema under the fluoroscope and reduce the intussusception by manipulation if possible. The enema can was elevated about three feet above the patient's abdomen, and the flow controlled by finger pressure on the tube. The barium column ascended without interruption to the middle of the transverse colon where it met the intussusception and its presenting surface took on the typical concave appearance. The buttocks were held together and the tumor mass manipulated with the idea of milking it in the desired direction. As the barium column advanced, a little more was admitted into the bowel to keep up the back pressure. This treatment was continued until the cecum was filled with barium.

No anesthetic was given. The time under the fluoroscope was about five minutes, at the end of which the child was rather exhausted and crying considerably. The barium was allowed to escape. He was permitted to rest about one-half hour when palpation revealed a slightly tympanitic normal abdomen with no tumor mass. The appearance of relief and well being was so marked that no further fluoroscopic observations were made. There were no further symptoms and the child is in perfect health at the present time.

This is the only case I have attempted to treat by barium enema, having used the usual method of reduction by laparotomy in five previous cases, but the results obtained at the first trial are encouraging. Nonsurgical methods of treating ileo-cecal intussusception are not in favor in this country, and I have not been able to find any reports of cases treated by barium enema and manipulation either here or abroad. The available material in America is small compared with Hipsley's recent report of one hundred cases in Sydney, Australia, of which over sixty were successfully reduced by normal saline enemas. Laparotomy was done in sixteen cases where there was doubt as to the result. This probably would not have been necessary had the colon been filled with barium to verify the reduction, a procedure easily accomplished in an infant.

Anesthesia could be used to advantage in certain cases as in Hipsley's procedure, but the ether should be removed from the fluoroscopic room before starting manipulations.

Another type of case which lends itself to effective treatment under the fluoroscope is the extraction of certain foreign bodies.

A. H., a girl of twelve years, came into the office with a piece of sewing needle about two cms. long in the palm of the hand. Two films were made, and under local anesthesia and ischemia a small incision was made in the skin and the needle searched for in the ordinary manner, using the films as a guide. The needle was not found after about twenty minutes of searching so it was decided to try the fluoroscope. A mosquito forceps was paced within the skin incision with the point as near as possible to the foreign body, a sterile towel thrown over the hand and the room darkened. The forceps was locked on one end of the needle in less than a minute and the withdrawal made under vision after freeing bits of tissue in the grasp of the forceps.

A boy of fifteen was shot in the anterior muscles just above the knee. The bullet could not be palpated. The wound was injected full of tr. iodine, followed by a few drops of novocaine solution in the skin surrounding the bullet wound. The skin was incised about one cm. and a closed Allis forceps thrust into the opening as far as possible and the fluoroscope turned on. The forceps was pushed against the bullet and opened. The object engaged the teeth of the forceps aided by a little counter pressure, and was easily withdrawn in about the time it takes to describe it. No infection followed and the trauma was minimum. The depth of the bullet was about five cms.

Much more difficult of removal are foreign bodies in the esophagus, and the fluoroscope is suitable for only certain types of cases. The following examples do not in any way minimize the value of the esophagoscope, an instrument which must be resorted to in the removal of many impacted foreign bodies in the gullet. An extensive literature is being produced on the subject, and there are a number of brilliant operators in the field. The endoscope should not be used however when simpler methods will suffice. The following cases will illustrate.

A. M., a boy of two years of age, was carrying a five cent piece in his mouth when accidentally it slipped into his esophagus. A film was taken showing the coin lodged opposite the manubrium sterni. He was sent home, the parents being advised to give bulky food to facilitate the passage of the coin into the stomach. The next morning however another observation showed the coin in the same location. The child was accordingly anesthetized with ether and a long curved forceps opening in an antero-posterior direction was carefully



guided into the esophagus by the sense of touch. The tip of the forceps elicited a click when the handles were flush with the teeth, by slightly withdrawing, opening the handles a bit, advancing and closing, the coin was brought up on the second attempt, the first grasp having failed to engage the coin. Gittens has reported a case of fatal infection from trauma in pushing an esophagoscope down on such a case. The instrument went by the coin and it could not be located. No mention was made of the use of any other method. I have successfully extracted an open safety-pin from the lower end of the esophagus by a simple method that may be used without previous experience by the average practitioner.

D. R., a boy of ten months, accidentally swallowed a small open safety pin. A pair of films about an hour after the accident was made showing the pin opposite the manubrium sterni. The child was anesthetized and the long curved forceps thrust down into the esophagus under the guidance of the fluoroscope in an attempt to grasp the point of the safety pin. The distance was about one cm. beyond the reach of the forceps, and furthermore the child gulped two or three times and the safety pin descended to the cardis. I then decided on expectancy as the best procedure and took a few observations hoping to see the pin enter the stomach. It did not advance so I took a No. 28 red rubber catheter and pushed it down on the pin but the catheter simply went by the pin which seemed to be firmly lodged in the esophageal wall with the point of the V downward. I then decided to extract the pin if possible through the mouth which I did in the following manner: The tip of the catheter was cut off and a small wire which happened to be the stylet of a small metal catheter was bent at the end to form a small fish hook. The catheter was passed down to the safety pin and the hooked wire down through the catheter. I attempted to hook the loop of the safety pin, but instead engaged it near the loop on the guard side. As soon as I started to withdraw the tube and wire, the safety pin reversed itself promptly and came up with the loop presenting. The total time of the procedure was about three minutes.

Care must be taken in manipulating in the esophagus as the slightest perforation usually ends fatally from mediastinal infection. This is true whether one is working with ordinary instruments or with an endoscope. While expectancy is usually the method of choice in swallowed foreign bodies, a certain number of cases cause fatal perforations of the food passages. This makes it desirable to remove them by manipulation when possible.

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#### DISCUSSION

Dr. A. H. Parmelee, Oak Park, Ill.: The paper presented by Dr. Stephens has been interesting to me, because it brings up again the question of medical management of a condition long considered in this country entirely surgical. The ingenuity of our predecessors is a source of inspiration. In looking through the literature, it was interesting to me to see what has been done in the past in the treatment of intussusception. I found an old copy of Henroch's "Kinderkrankheiten," printed in 1893, in which he recommends ice water enemas for reduction of intussusception, and speaks of surgery as the last resort. Forceful inflation with air he thought inadvisable on account of the great danger of rupture from too much pressure.

Professor Fischl, of Prague, writing in Pfannndler & Scholsmanns System of Pediatrics, speaking of the recent tendency to open the abdomen, immediately, says, "I hold that this procedure has gone too far, judging from my own experience and that of many others, and would recommend in fresh cases which have lasted only a few hours the careful use of an enema, one quart of luke-warm water allowed to flow from a height of two feet while the pelvis is elevated. Such a child must remain under observation after reduction has been brought about, since intussusception may form very shortly again. In addition, intestinal rest secured by opium is strongly indicated."

Osler, in "Practice of Medicine," cites Wiggin's report of thirty-nine children treated by inflation with enema with sixteen recoveries.

Occurrence is most frequently in young children; fifty per cent. in the fourth, fifth, and sixth months. Seventy-five per cent. are iliocecal, hence amenable to this type of treatment. Those involving the small bowel alone are out of the question. We have a very large proportion which do not come under management until it is rather too late for them to be good non-operative risks. I mean the cases that come after three or four days, or after three or four days diagnosed as intussusception.

The use of an opaque solution such as barium is an enormous improvement over the older, blind method. The attempts at reduction by this method in selected early cases under close hospital observation should save many infants from the shock of surgical procedures. But the man who attempts this method must know the

possibilities of rupture of a friable gangrenous adherent bowel. It would not be a hard matter to cause a perforation. If they are watched under the fluoroscope, possibly that sort of thing could be at least suspected much sooner than with the former method.

I would like to ask Dr. Stephens if he thinks that reduction of an intussusception by a non-operative procedure is more likely to be followed by return than one reduced by operative procedure.

Partial reductions are another danger, with the non-operative procedure; unless one is careful and is absolutely sure that the thing is entirely reduced a great deal of valuable time might be lost.

His diagnostic procedure, diagnosis of intussusception with this characteristic cap or cup which he described seems to me of great value. There are many cases of vomiting young infants, with pain, and with a distended abdomen. Sometimes it makes us sweat blood to know whether that child should be subjected to surgery or not.

In this connection of non-operative treatment of intussusception, showing that others are thinking on the subject, the very last number of the *American Journal of Diseases of Children* has an article written by Dr. Metan, of Syracuse, New York, on the non-operative treatment of intussusception, in which he used exactly the same method in one case which Dr. Stephens used.

Dr. Preston M. Hickey, Ann Arbor, Michigan: I was very much interested in the doctor's discussion about the removal of foreign bodies under the fluoroscopic control. I think that is a measure which has rather fallen into disrepute on account of the pronounced attitude of some of those who practice esophagoscopy. Personally, I have had the opportunity to practice both.

I found oftentimes it was very much simpler to pass the forceps under the fluoroscopic control and remove small bodies from the upper portion of the esophagus than it was to get an assistant, place the head and neck in the proper position and then pass the esophagoscope. I think if one studies the method that is just as safe a procedure as attempting to pass the esophagoscope. That is especially true, I think, if one has the opportunity of using the bi-place fluoroscope.

The fluoroscopic control, in the removal of bullets and needles, I think, is something we as roentgenologists should certainly encourage, because the laceration of hands and feet which occurs when the surgeon attempts to remove foreign bodies without the fluoroscopic control, I think, is sufficient to condemn the method.

Dr. E. G. C. Williams, Danville: Hearing the doctor give his talk about going after these foreign bodies, I imagine that he has a more or less mechanical turn of mind, and I suppose he has some tools at home and does a certain amount of tinkering; and has learned to use the mechanical ability with which the Lord endowed him rather than to depend entirely on the refinement of instruments.

Those of us who have practiced in remote communities have had at times to use our ingenuity and make

the best of it. I remember a case when I was far from an esophagoscope or anything, when a child attempted to swallow a 32-caliber shell. It went down open end first and there was no way to get hold of it. I put the youngster on its back, with the head pulled over, with three or four good-sized farm hands to help me. I took a piece of baling wire with a hook and went after the shell and got it out.

Another time a screw went down point first, and you could poke a finger far enough down the child's neck to pull the soft tissue apart and go after it with a pair of forceps and pull it out.

I remember as a youngster a gentleman was celebrating Cleveland's election and tried to swallow a half dollar. He partially succeeded. Old Frank Miller, the blacksmith across the road, made a pair of forceps, a fine piece of work. While most of the community held the gentleman down the doctor went down the fellow's neck and brought up the half dollar.

It has been delightful to have somebody come in and tell us where he has used his ingenuity rather than depending upon fancy instruments.

In a number of other instances I recall difficulties in removing fragments of sewing needles in the hand and foot similar to those cited by Doctor Stephens, but never did I see anyone just reach in and pull out the foreign body in a manner in which his paper would lead us to believe was possible through the use of the fluoroscope. Some of the doctors are skillful in removing foreign bodies, a procedure which takes up many minutes of time, and others are just lucky, reach in and simply pick it out "just like that."

Dr. E. S. Blaine, Chicago, Ill.: The Chair wishes to say a few words regarding the removal of foreign bodies with the aid of the x-ray. The fluoroscopic screen gives but two dimensions, therefore objects which lie in the deep tissues are difficult to grasp with forceps. Until a practical stereofluoroscope is developed the fluoroscopic search for foreign bodies should be discouraged, except in special instances. Until such time we will find the stereoscopic pair of films the most reliable for foreign body search. But even with this aid, defeat awaits the unwary, and even the most experienced surgeon will occasionally encounter a case in which he saw very beautifully the shadow of a bullet or other opaque object, the exact plane on which it lies and then fail to locate it after a long continued exploration. This occurred to no less a great surgeon than the late E. Willys Andrews at Cook County Hospital in my early days as Roentgenologist at that institution. Operating before a class of about one hundred medical students in a gunshot wound of the knee, he extolled and dilated on the superiority of the stereoscopic x-ray which I had previously shown him. After informing the class of how easy it would be for him to just put his forceps on to the bullet, he started to fish for that bullet, but after an hour of search gave it up in chagrin at his failure. He had asked me to move the stereoscope into the operating amphitheater so that each student could get the depth vision of that bullet. The next day the patient was again x-ray examined, also with a stereoscopic pair, in exactly the



same posture as on the original study. There was the same shadow of the bullet in exactly the same location, but with its nose turned in the opposite direction, indicating that the surgeon had repeatedly been in contact with his instruments with the foreign body.

Dr. V. R. Stephens, Berwyn, Illinois: I certainly appreciate the interest shown in what I thought was a very simple and non-technical discussion. There is one point about the safety pin in the lower end of the esophagus. In the last year-book of surgery, the little blue book edited by Dr. Graham of St. Louis, nearly a whole page is devoted to the very highly commendable operation of taking out a safety pin in the same position by doing a gastrostomy, by putting the finger up through the cardia and extracting it through the stomach. I do not think I could do that. It sounds too difficult, but it has been done in case of an impacted dental fixture as well as that of a safety pin.

In regard to intussusception, Dr. Parmelee asked if I thought the recurrence would be greater under the enema than by surgical procedure. I have had but one case of recurrence in intussusception. The one I reduced by barium enema has not since recurred and the same case did recur three months after surgical treatment. I always inspect the entire ileocecal region to be sure it is completely reduced before closing the abdomen. In regard to operative fixation, the statistics do not sound very good to me. One German surgeon lost twelve cases out of twenty in which he tried to fix the ileocecal region so a recurrence would not take place. I do not think that recurrences take place often. They do occasionally, but not often enough to warrant the added operative risk attendant upon any method of fixation.

## THE USE OF IODIZED OIL FOR THE X-RAY EXAMINATION OF DISEASE OF THE FEMALE PELVIS\*

JULIUS BRAMS, M. D.

AND

JACK R. LAVIERI, M. D.

Roentgenologist and Attending Gynecologist, Respectively,  
St. Elizabeth Hospital

CHICAGO

The introduction of contrast material to make an organ radio-opaque has made possible the investigation of the gastro-intestinal, genito-urinary, biliary, and respiratory tracts. The examination of the female pelvic organs has, however, been only fairly satisfactory. The plain film was practically useless. With the aid of pneumoperitoneum much valuable data was obtained. The uterus, tubes, and ovaries could be quite constantly demonstrated by contrast against the injected gas. The introduction of

the gas either by the trans-abdominal or the trans-uterine routes was a more or less formidable procedure; special apparatus was needed, and the results were good only in the hands of an expert. Occasionally a bad accident occurred and as a rule the patients suffered more than transient pain. The injection of the opaque substances commonly used in x-ray work was unsatisfactory and resulted in some bad reactions. With the introduction of iodized oil a new field was opened up.<sup>1</sup> It is not intended here to discuss the various uses of iodized oil but our purpose will be to describe its uses and discuss its merits in the diagnosis of diseases of the female pelvis.<sup>2</sup>

Although the method is relatively new, numerous reports in the literature have already appeared which would lead one to believe that this simple method of examining the female pelvic organs can yield much valuable information. First reported by Portret and Cotte<sup>2</sup> many publications in which further uses for this procedure were mentioned soon followed. C. Heuser<sup>3</sup> first introduced the injection of iodized oil for the diagnosis of early pregnancy and states that no harmful results follow. E. C. Steinharten and S. Brown<sup>4</sup> suggest that the uterine cavity should be examined by this method before curettage to determine the nature of its contents. Q. U. Newell<sup>5</sup> reported the investigation of the uterus by this method to differentiate between foreign bodies within and outside the uterus. Practically all of the authors mention the demonstration of the normal uterine cavity and tubes, tubal occlusion, intrauterine pathology and other pelvic masses.

Although not very large we are reporting our series of cases because of the many interesting conditions encountered and hope to help stimulate a more widespread interest in this method of examination. In addition we have what we believe is an improved syringe for injecting the oil and will show some lateral views of the uterus injected with oil as means for determining the position of the uterus roentgenologically. The picture of the syringe is self explanatory. Briefly it consists of a 10cc. Vim barrel which is screwed on to a uterine canula at the end of which a pitcock is incorporated. At the curved end a fixed cervical plug is attached. The advantages of this type of syringe are that it is practically

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unbreakable, it does not leak, is easy to sterilize, and lends itself to an easy injection of the oil. The technique for making the exposures is the usual Bucky diaphragm technique for taking the lumbar spine in the A. P. and lateral views. The injection of the oil is simple. The cervix is pulled down, cleansed with iodine, the canula inserted so that the plug fits tightly against the cervical opening and from 5 to 10cc. of the oil injected slowly. When the injection is completed the pitcock is closed to retain the pressure within the uterus, the barrel removed, and the exposures made as soon as possible. We have had no reactions of any degree. A few patients complain of supra-pubic pain for a few hours but none are greatly inconvenienced. There are, however, some precautions which should be observed. The injection must be made slowly, the pressure within the uterus must be maintained until after the exposures are completed because of the tendency of the oil to escape rapidly; one should seldom if ever inject more than 10cc., and the injection should not be made in the presence of an acute or subinfection. It is best to question the patient regarding the date of her last menstrual period as it is very undesirable to do the test within a week before or after a menstrual period, and extremely dangerous in our opinion in the presence of an early pregnancy. The question as to how long the iodized oil which is free in the pelvis remains and its possibility of causing trouble is of course to be considered. We have observed it three weeks after injection and it no doubt remains longer, but we have noticed no ill effects nor have we found any reports in the literature of any. Newell examined the mucosa of normal fallopian tubes ten days after injection and found them normal in every way.

It is not possible in a paper of this type to describe all of the roentgenograms in our series, but it may be of interest to mention the various conditions we encountered before showing the lantern slides. We may mention the normal uterus and tubes, occlusion of one tube, occlusion of both tubes, uterine displacements, pelvic adhesions, distortion of the tubes from uterine tumors, infantile uterus, localization of the site of obstruction in cases of tubal occlusion, anomalies, etc. Other writers have reported intrauterine pathology and a definite cause for

some of the cases of essential bleeding has been demonstrated. In some clinics and combined use of the iodized oil and pneumoperitoneum is practiced. I. Stein and R. Arens<sup>6</sup> who first introduced this method have reported a series of cases done in this way and claim that the most information is obtained in this way. Where the apparatus and time are at hand this is undoubtedly true. These authors have also emphasized the importance of spasm of the tubes and have called attention to the advisability of using an antispasmodic at the time of the examination to avoid errors in diagnosis, a point of considerable importance.

In conclusion we believe that the simplicity and safety of this procedure warrants its use more often in the roentgen diagnosis of gynecological conditions and that with more experience many other conditions than those mentioned will be recognized.

#### SUMMARY

The use of iodized oil in the diagnosis of disease of the female pelvis is a very valuable diagnostic procedure and should be a part of the complete examination wherever possible. Many diseases cannot be diagnosed without it.

A new syringe for the injection of the oil is described which is believed to be an improvement over those ordinarily used for this purpose.

The lateral position of the injected uterus is suggested to determine the position of the uterus when the bimanual examination is doubtful.

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#### DISCUSSION

Dr. Irving Stein, Chicago: I enjoyed the demonstration by Dr. Brams, particularly since we have been using this particular method also. I think by far the greatest value of iodized oil in diagnosis is in the study of sterility, and in those cases of sterility in which we have used the iodized method, it has been complementary to the patency test. The indications are exactly the same, and the contra-indications are also the same as those that govern the Rubin patency test. The Rubin test is no longer on trial. The iodized test is still on trial. I think as time goes on, if we can prove that there is no damage done to the tubes, uterus, or peritoneal cavity by the use



of the iodized oil, the method will prove to be satisfactory.

I think Dr. Kirklin brought out in the discussion of the gall-bladder the response of the gall-bladder to emotion and to patency and other more or less remote influences. We find particularly that the uterus responds to the least little distention in pressure by contracting.

I wish to refer to the picture that Dr. Brams showed as number 4 of his slides, where there was a deformity on one side of the uterus with the tube occluded which was not a pathologic occlusion. Some of the triangular shadows the doctor showed would, from that point of view alone, incline one to think that the tubes were occluded.

## THE COMPLICATIONS OF SUPPURATIVE MIDDLE EAR DISEASE\*

HARRY L. POLLOCK, M. D.,

CHICAGO

The subject allotted to me by your secretary covers practically the whole field of otology. The complication which we meet most frequently is an external otitis caused by the discharge which seeps out of the middle ear through the canal, which often, depending upon the amount of secretion, causes a great deal of annoyance, and in fact sometimes causes the patient more trouble than the acute otitis media. Sometimes, in children, the ears do not obtain the attention they require. These little patients cry and fight when care is attempted and the resulting struggle does more injury than good with the result that the secretion often causes a dermatitis over the cheek. The condition yields very readily to a salve, but on occasion can become quite serious, not only from the discharge itself but because the canal also swells. The skin in the canal often becomes so swollen that it is difficult to release the secretion from the middle ear, which is likely to cause complications in that region.

The next serious result may be the extension of the inflammatory condition backwards from the mastoid antrum into the mastoid cells. Recently there has been a great deal of discussion, especially among Europeans, as to what this disease is called. We usually call this condition acute mastoiditis, but it appears that some authors call it endostitis. The lining of the antrum and the mastoid cells is not true mucous membrane, but is known as endosteum. This

inflammatory condition and inflammation of the endosteum is called endostitis, and the term mastoiditis is not to be used until the bone itself is involved. Kranz, who was the first to bring the subject to our attention, claims that in no case is the bone affected in less than three weeks after onset of the disease, while Mayer just published a long article on histo-pathology of bone chips in thirty cases, demonstrating that as early as four days the bone itself was affected. So we may use our own judgment in the matter of terms. But at all events, any case of acute suppurative otitis may be complicated by an inflammation of the lining of the cells. We all know that, but what shall we do for these cases?

In a child or an adult who has had a paracentesis or a spontaneous rupture, the great question arises as to when do we have a surgical mastoiditis. That is to say, when is that mastoid sufficiently involved to cause one to use surgical interference? This is also a matter of a great deal of discussion and as I have said, most authorities believe it takes three weeks for the cell walls to break down and that unless some other urgent complication arises, no operation should be undertaken before three weeks because by that time the cell walls are broken down and the cavity walled off with the result that the operation is less dangerous. Others, however, say that if there is fever and profuse discharge four days after onset of acute otitis, the mastoid should be opened. In the last two or three years we have seen many cases in our clinic operated on by others and by ourselves in the early stages and I assure you that all the bad results were in those cases that had been operated on too early. We of course do not delay operation if there is some special complication such as a beginning meningitis or a bulging out behind the ear. The time when to operate on the mastoid where there is discharge and some pain in and about the ear is a matter of judgment. I can assure you that it is usually safer to wait for three weeks than to operate in four days. Nature has a way of walling off, and there is a certain amount of protection in the blood which helps to throw off further infection.

If a case of acute otitis media presents itself with a swelling down in the neck or back of the ear, delay of operation would naturally be inadvisable. In such case the sooner operation is

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done, the better. In this problem of when to operate such aids as x-ray, laboratory and blood findings are very important. If a skiagraph is taken of the two mastoids for comparison and they are both found perfectly clear, delay of operation is advisable even though there is a rise in temperature and pain. However, if one side is cloudy or the cells have broken down, early operation is advisable. Without attempting to belittle the value of such aids as x-ray, blood findings, etc., these are only aids in the clinical diagnosis. If our clinical experience teaches us that the mastoid must be opened, laboratory findings may be altogether ignored.

Another complication looked for, especially in children, is a subperiosteal abscess. In these little patients, the cortex being thin, there is scarcely any resistance in this direction. Just a few days ago I had a case of acute otitis media which had a swelling back of the ear. There was no rise in temperature and the child showed its usual activity in play. A small incision was made through the skin and the curet fell into the antrum. A drain was inserted and in a week the child was well. The less that is done in these cases aside from opening them and putting in a drain, the better for the patient. I now wish to take up a more serious complication.

Consider the case of a patient suffering from acute otitis suppurative with a slight increase of temperature, who suddenly gets a chill followed by increased temperature, rising rapidly to 105 or 106, which drops to normal by the next morning. What is to be done in such undesirable but frequent complication? We naturally first think of a lateral sinus involvement. However, that is sometimes erroneous for we have had cases with the aforesaid complication in which intestinal infection was found. Upon cleaning out the bowels the temperature came down to normal. Many other conditions may cause this sudden rise and the question is whether to operate immediately or wait twenty-four hours. In my opinion it would be foolish to operate unless a second rise in temperature occurred. The probabilities are that the second rise of temperature would maintain its increase and in that event exploration of the lateral sinus is the only procedure indicated. Shall we open it up and explore it, or shall we use our judgment in observing the sinus to see what it looks like, or shall we ligate the jugular

first. Just recently while in Europe I was given some statistics from the Budapest Clinic regarding fatalities of lateral sinus thrombosis to the effect that in 60% of the cases wherein the jugular was ligated, the patients died, whereas only 20% were fatal in the cases where ligation was not done. From these figures it would appear that ligation was three times more dangerous than non-ligation. However, that does not prove anything, since the jugulars were ligated as a last resort in unfavorable cases. In the more favorable cases, ligation was not resorted to. In view of these facts it is very logical that in the former group the percentage of fatalities was much higher than in the latter. My suggestion would be that upon exposing the sinus and finding a healthy looking sinus, pulsating with every breath, further interference is contraindicated, since any interference adds that much more danger to the patient's condition. If, however, the sinus is found covered with granulation, these should not be removed and unless there is a sinus thrombosis, the patient will do nicely. Very often we find an abscess around the sinus itself, but not within the sinus. These do well by draining.

How shall we determine the presence of a lateral thrombosis? Shall we puncture the sinus with a needle to ascertain this? We first get a mural thrombosis which gradually fills up and blocks the entire sinus. A needle inserted into the central part of the sinus may withdraw fresh blood and there may, nevertheless, be an involvement there, namely, a mural thrombosis. In such cases, I make a small incision with a knife into the sinus wall and if no bleeding is obtained, it indicates the presence of either a complete or mural thrombosis. What is the most rational treatment for a lateral sinus thrombosis? It should be cleaned out completely, if possible, attempting to obtain free bleeding from both ends. The jugular may then be ligated if the operator deems this advisable. The consensus of the majority is that one does better to ligate the jugular. I have seen these cases go along with septic symptoms for a week or ten days and after the jugular was ligated the symptoms cleared up. Of course we usually find a positive blood culture. Sometimes we ligate after the sinus is inspected, but I am not in favor of ligating before the sinus is inspected as I do not see any necessity for doing that. How does the



lateral sinus become infected? First, by continuity of the bone infection into the sinus; second, by the infection being carried by the blood stream; third, by lymphatics.

Another complication much more frequent than sinus thrombosis is a labyrinthine irritation. I have seen a case of labyrinthitis as early as the second day after paracentesis, with nausea, vomiting of the projectile type, the characteristic position of lying with the head buried in the pillow, and a nystagmus away from the affected side. This complication appears serious but it all depends upon the character of the labyrinthitis. If the labyrinth itself is not infected, only irritated, these symptoms gradually recede, after about a week, until the patient is free from them. If the infection, however, which is still less frequent than a sinus thrombosis, gets into the labyrinth, there is no resistance and it terminates very quickly in suppurative leptomeningitis. Labyrinthitis may be localized or generalized and the symptoms will depend upon how much is involved. What is to be done? Should one operate immediately in these serous labyrinth cases and drain out the labyrinth? You will see that this would be very foolish, for if we have an acute serous labyrinthitis, we are just adding more danger to the condition. (I was taught that the thing to do was to operate as soon as we got the typical picture of labyrinthitis) and those I operated on passed away very quickly without recovering consciousness. Since then, we have found it a very poor policy. It is always best to wait until this condition has subsided, always a week or ten days after the onset, before doing anything surgically, even on the mastoid. If the mastoid is bulging, it should be drained, a hole quickly bored, letting out the pus. The patient will feel very much better and when he has recovered one can proceed with the labyrinth operation. If the condition continues and does not subside, it is an altogether different story we are dealing with, it is a serious problem, a suppurative labyrinthitis which develops meningitis or death, so that nothing is lost by operating immediately. I have seen very few done except in extremis, generally in the last stages and beyond all help, but I have seen a few cases recover where we found absolute diagnostic points, cloudy spinal fluid and high bacterial count in the fluid itself.

There is another complication that I might bring up at this time which seems to be the most talked of complication. There has been more discussion about this in the last year or two than anything I know of, that is a complication of cholera infantum in children. Whether this is a complication of acute otitis or whether the mastoiditis is a complication of cholera infantum in children has not been settled, but all of you who have been reading the literature during the past year or two know that marvelous results are obtained by quickly opening the mastoid, even in the presence of very little infection in the mastoid. Dr. Lyman of St. Louis gave a report of a number of cases, practically all of which died who were not operated upon. They were all small children, and some had practically no mastoid symptoms, others had a slight redness of the drum, but when they opened the mastoid the temperature receded to normal and the children recovered completely. The otologists serving in the wards of children's hospitals report very favorable results, while on the other hand reports from other otologists indicated that all patients with these symptoms who were operated on died. In some instances they found no mastoid symptoms, and found no pathology when they operated. The mastoid was perfectly normal and the children died. Where they did find the mastoid involved, the results were remarkable. I have never seen one case, though I have been looking for them in the past few years.

Another complication we meet is acute suppurative meningitis. The course of this is, acute otitis, mastoiditis, labyrinthitis and finally meningitis, all the clinical symptoms present, and in these cases it is a question of what to do when meningitis is developed, whether to treat it surgically, by opening the mastoid and labyrinth and draining same or whether to put the case in the hands of the neurologist and have him treat the intraspinal canal. If bacteria are found in the spinal fluid, they practically all succumb. We have seen a few cases that have lived, with a clinical picture of meningitis, but with no bacteria in the spinal fluid.

Other complications one may get are brain abscesses, extradural abscess, cerebellar abscess. It is easy to explore around and see if an extradural abscess is present, but the brain abscess and cerebellar abscess are not easily determined

at times. If we have a progression of the symptoms outline, the patient in a comatose state, all the symptoms of intracranial pressure and other symptoms, we must think of abscess of the brain. There are often no focalizing symptoms and it is very often discouraging to go in and not find the abscess, and then a few days later at post mortem find an abscess on the other side, large enough to put your foot into. We had a case in which we called in two neurologists to localize the abscess. One said it was in the temporo-sphenoid lobe. We explored and found nothing. We called another neurologist in consultation who localized it in the frontal lobe, but we were unable to find it. The following day the patient died and at post mortem we found a large abscess as big as a goose egg in the temporo-sphenoid lobe opposite from that localized by the first neurologist. It is often difficult to get enough focalizing symptoms to localize a brain abscess.

2551 North Clark Street.

#### DISCUSSION

Dr. George Boot, Chicago: Contrary to Dr. Pollock's experience, I have seen two cases with findings of streptococcus in the cerebro spinal fluid recover. I had one recover where there were over 30,000 cells. We recently had at the County Hospital a child with otitic streptococcal meningitis that had every appearance of going to recover when he developed a pneumonia. I recently operated on a child who had had measles. She did not do well after the operation. The ear continued to discharge profusely. She complained of headache, vomited occasionally and became very much emaciated. She had spontaneous nystagmus looking to the left, and when we tried past pointing the right hand would come down steadily, the left would come down with an ataxia every time. The left leg also came down with an ataxia. I am sure there was cerebellar involvement on the same side. She was transferred to another hospital where a cerebellar abscess was found on operation.

A woman of 30 had a right sided earache with discharge. Suddenly her temperature shot up to 106 then fell to about normal in a few hours. There was a moderate amount of discharge but practically no tenderness. She had an acute rhinitis and the mucous membrane was decidedly congested and dry. The next day the temperature was up to 104 and then dropped to 99 and she began to have a decided arthritis of both knees. Still I could not convince myself that she had a mastoiditis. I waited another day. The temperature shot up, but the ear was better. The temperature dropped again, and next day shot up again and the ear kept on improving. There was no change in the eye grounds, nothing to be found in the neck and there never had been any

chill. We finally came to the conclusion that she had inflammatory rheumatism in both knees, which was due to infection in the upper respiratory tract.

Dr. C. W. Hawley, Chicago: This paper is on the complications of otitis media. He has given you about all that anyone could say on the subject. I would like to take a little divergency. I happened in the operating room the other morning where two men were operating on a mastoid. One was a man of considerable experience, the other just learning. A number of years ago I did some anatomic work on 250 mastoids, and this man knew that, and he asked me to come in and look at the case, and this is what I found. They were operating on a mastoid in which the lateral sinus lay up against the posterior wall of the ear. They had already removed part of the bone. I showed them how to get at that antrum, and if you will excuse me I will show you what we did. One man thought we went into the antrum and they were going to leave it there. (This was something drawn on the blackboard). They were really in a cell. You must go into the ear and very carefully locate the superior portion of wall of the ear. Then the antrum may be found a little higher than usual. Don't try to do the work with a large curette. Use a very small curette and a very small chisel. This abnormality occurs more frequently than we suspect. I have met several cases where the lateral sinus was very close to the posterior wall. Some of the younger men who do not know how will be in as much trouble as these men were the other day, and I think it was fortunate for the patient that I was there.

Dr. J. A. Cavanaugh, Chicago: Speaking of foreign bodies in the external auditory canal, I have seen two cases in the last year. One, a case where a bed bug had gotten in the external auditory canal and when it touched the ear drum the patient would go into hysterics and roll over on the floor. The bug could be seen in the canal. It is very easy to destroy insects by placing a little chloroform on a pledget of cotton and placing it in the canal. Another case, a child had inserted a stone in the external auditory canal. An anesthetic had been given and an attempt made to remove it and when I saw the case the canal was swollen and the hammer handle lay on the floor of the canal. The stone was removed by making an incision post auricular, splitting the periosteum. It is very important in removing foreign bodies to keep in mind the position of the drum.

Dr. Sheldon Clark, Freeport: The complications of mastoid disease may be many. Dr. Pollock speaks of the simple complications. I think we are prone to look only for the larger things that may occur and not pay due attention to the simpler things. I had one complication of the skin of the ear canal and the side of the face due to acute mastoiditis that caused more trouble than the disease itself. It was a mastoiditis due to swimming, and after opening the mastoid the patient developed a severe dermatitis. I tried all sorts of treatment but was unable to get it to subside. I stumbled on to the fact that it might



to due to some sapyophytic infection and discovered it was. By using sugar I caused it to subside very quickly. This is what the good house-wife does when she uses sugar in her canning of fruits.

Dr. H. B. Young, Burlington, Iowa: Among the problems in suppurative otitis media was a case I had when the x-ray picture was not available. The pus came from a small perforation post superior quadrant; puffiness of the post-canal wall; tenderness over the mastoid; and nocturnal pain. On opening the mastoid antrum I did not find the pus and bone involvement I expected to find; but for five days all went well. Then the nocturnal pain returned, and, next morning, there was a lump on the posterior border of the sterno-cleido-mastoid. A misapprehended "Bezold" was now the verdict. The wound was re-opened, the tip cell exenterated, the digastric fossa explored through an opening back of the muscle, and still no pus. Again, for three days, everything was lovely. Then, although the ear was dry and the wound healing, the nocturnal pain came back,—hard. A colleague (general practitioner) then suggested 30 grains of quinine in divided doses, at 6, 7 and 8 P. M., and it worked wonders. In another three days the patient was well enough to go home.

Another problem of a different kind.

This time a call from a colleague, in the country,—an all day trip in the winter, to make a mastoid operation. When I had examined the patient I felt that an operation was, not yet, justifiable; and it was then up to me to square my colleague with the patient's family. I think I did this rather well; and there was a recovery under the treatment already inaugurated. But my colleague has never, since, asked me to see any of his patients.

Dr. Harry L. Pollock, Chicago: Facial paralysis is also a complication of acute otitis media. One sees it quite frequently following such a case, but it clears up when the mastoid is operated on. I would add that I have never had a case of the type cited by Dr. Boot.

### SOME FEATURES OF BRONCHOSCOPY AND ESOPHAGOSCOPY\*

M. H. WINTERS, M. D.

GALESBURG, ILL.

Direct laryngoscopy, bronchoscopy and esophagoscopy can only accomplish their best when the bronchoscopist works in harmony with the general physician, the pediatrician, the roentgenologist and the surgeon. The internist and pediatrician see this type of case first, and should be trained in their symptoms. They know the physical signs of pulmonary involvement better than the bronchoscopist. The roentgenologist should be trained so that he is capable of inter-

preting the x-ray pictures. He also furnishes fluoroscopy.

In this field the treatment is done mostly by the internist, and the surgical work by the surgeon. This type of work is all done per oram, even when a tracheotomy has been previously performed for some other reason.

There are two methods of performing bronchoscopy and esophagoscopy, namely: direct and suspension. The direct method is the better as it causes less inconvenience to the patient. However, it requires a trained assistant who knows how to hold the head and neck. A fixed system of procedure is not only of value as a time-saving element, but in the case of an emergency, if each assistant is trained in one duty, time and therefore life can be saved.

For the bronchoscopist to have a thorough training, a full set of instruments and scopes is necessary. It is vitally necessary also to have a proper technique, and this can be acquired only by constant practice. It has been said by Chevalier Jackson that no one can master bronchoscopy. It is almost certain to kill the patient, especially a baby, if an inexperienced person in this line orders a bronchoscopy in an emergency and attempts to remove a foreign body. Furthermore, the chances are that the foreign body will not be removed. Bronchoscopy is a specialty within a specialty. For the specialist in this line it is necessary to have mechanical knowledge as well as good vision.

Many physicians think that the removal of foreign bodies is the whole field of bronchoscopy, whereas a bronchoscopic clinic such as Dr. Jackson's in Philadelphia, there is one foreign body case to fifteen treatments. This work consists mainly of treatments for laryngeal stenosis, removal of laryngeal growths for diagnosis and treatment, bronchial asthma, bronchiectasis and lung abscesses, in the proportion as follows: four or five laryngeal stenosis, one or two laryngeal growths, two or three bronchial asthmas, and six or eight cases of bronchiectasis and lung abscesses. In this clinic they also have six or eight cases of esophagoscopy, one case of a foreign body, and five or six of esophageal stenosis, which are usually in children. Children under twelve should receive no anesthetic, local or general; over twelve a local application of 10% cocaine should be given to the laryngopharynx. In foreign body

\*Read before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Moline, June 1, 1927.

cases for adults morphin sulphate is used. For children paregoric is used.

Most foreign bodies are simple problems at first, but the mother, the patient, or the physician attempts removal and the foreign body drops into the esophagus, or the tracheobronchial tree, and the case is made very much more difficult and dangerous. The esophagus with its hundreds of folds and ease of perforation makes the problem difficult and dangerous. The bronchi, with upper lobe branches and secondary and tertiary branches of the lower lobe, make it very difficult, especially to remove a pin or a needle.

Laryngeal stenosis is most commonly post diphtheritic as diphtheria tends to necrose tissue. Stenosis is also caused by coasting accidents and high tracheotomy, especially associated with an improperly fitted tracheal canula. A high tracheotomy saves the patient's life, but it is better to do a low one first. By high tracheotomy I mean a tracheotomy through the thyro-hyoid membrane, the thyroid cartilage, the crico-thyroid membrane, the cricoid cartilage or the first two tracheal rings. A tracheotomy through the first two tracheal rings, because the conus elasticus does not tolerate the tracheotomy tube but swells and causes stenosis, is inadvisable. High tracheotomies are emergency ones which show there is a tendency on the part of the doctor to delay tracheotomy too long, and then an emergency operation is done which is usually a high tracheotomy. A tracheotomy should be a quiet, orderly procedure, performed under a local or no anaesthetic, and it should be done when the child is restless and unable to sleep, as every time the child tries to fall asleep, it awakens because of insufficient air. The accessory muscles of respiration are working. One notices indrawing of the supra-sternal, supra-clavicular, intercostal and the region of the ensiform cartilage. The physician too often waits until the child is blue from insufficient air or turns grey, which is cardiac failure. The turning grey is sometimes mistaken for a good sign. Low tracheotomy not only gives the child the necessary air, but it allows the child to sleep, recuperate, and also it puts the inflamed larynx to rest, and rest to the inflamed larynx is of great benefit. Tracheotomy is preferable to intubation in laryngeal diphtheria, though sometimes tracheotomy and intubation can both be avoided by aspirating the secretions and membranes.

In Ludwig's angina or cellulitis of the neck when a tracheotomy is indicated the bronchoscopic light in the trachea orients the physician. Some general physicians hesitate to have a tracheotomy performed for fear of pneumonia, but pneumonia does not follow a tracheotomy if it is properly treated. A properly performed tracheotomy implies low tracheotomy, incision exactly in the midline, proper size and curve of tube, and attention to tracheal and bronchial secretions, also no stitches.

*Lung Suppuration.* Under this head are bronchiectasis and lung abscess. The etiology of bronchiectasis you all know unless perhaps we don't all realize the importance of sinus infection draining downward into the tracheobronchial tree. The etiology of lung abscess is pneumonia, influenza and postoperative, gangrene of lung is when the putrefactive bacteria contaminate. Lung abscess is often diagnosed tuberculosis, bronchitis, bronchiectasis and sometimes empyema and gangrene. One can differentiate from empyema, for in empyema the fluid level shifts. For further information on lung abscess I shall refer you to Volume LI, ILLINOIS MEDICAL JOURNAL, April, 1927, an article by Dr. Peter S. Winner.

The bronchoscopic treatment of lung abscess where the abscess empties into a bronchus, as it often does, consists of the aspiration of pus, and instillation of antiseptics, combined with the use of a vaccine. Bronchoscopic aspiration when combined with postural and antitubercular treatment and instituted early gives the best results. Bronchoscopic aspirations are performed twice a week, but are gradually lessened as the patient gains in weight and strength, provided the physical signs and the amount of secretion are diminishing. The bronchoscopist can aid the roentgenologist by means of bronchoscopic insufflation of bismuth, or instillation of lipiodol. Under bronchoscopic aspiration the recovery of children is 100%. In adults there is no way of knowing, until treatment is tried, whether or not they will recover. However, the lower half of the left upper lobe and the left lower lobe do not respond to treatment as well as the other lobes. Bronchiectasis as a complication of lung abscess decreases the chance of recovery. Bronchoscopy is contra-indicated in (a) cases of recent hemorrhage, (b) a moribund patient, (c) very extensive disease of lung tissues, involving one-half



or more of one lung, (d) organic disease of the heart and great vessels, (e) laryngeal tuberculosis. Patients are willing to continue the treatment as it lessens the cough and decreases the foul expectoration. Bronchoscopic aspirations should be stopped during acute infections.

*Asthma.* The internist should rule out cardiac and renal asthma; the bronchoscopist should treat only bronchial asthma. Autogenous vaccines are made at the first bronchoscopies. The following formula is used: 20 drops of a 1-1000, 10 drops (10%) cocain; normal salt solution 1 drachm. If thick, tenacious secretion is present it should be removed. Bronchoscopic instillation of medicated solution seems to relieve asthmatic attacks for a relatively long time. A diagnosis of asthma in a child should never be made unless foreign body is first eliminated.

It is not known why bronchoscopic aspirations of small amounts of secretion relieves in asthma.

*Drowned Lung.* A condition in which the secretions of the lung are retained distal to an occluded larynx trachea or bronchus is called drowned lung. Drowned lung occurs in children with foreign bodies, results following tracheotomy, or laryngeal obstructions following acute infections. It is especially prone to occur in very young children as the cough reflex is not well developed, and they soon tire. Even in adults large amounts of secretion are found following severe coughing spells.

There is a type of bronchitis due to spirochetosis which responds to arsphenamine, and bronchoscopic aspiration.

*Esophagoscopy.* Esophagoscopy is more difficult and dangerous than bronchoscopy. It is more difficult because of hundreds of folds and the presence of secretion, and the walls are collapsed. It is more dangerous (a) because of the ease of perforation, (b) normal esophagus is septic. The dangers resulting from perforation are: septic mediastinitis, and the perforation of great vessels. Most esophagoscopic work is treatment rather than the removal of foreign bodies. The most common treatments are treatments for stenosis in children, resulting from strictures following the accidental swallowing of lye, lysol, carbolic acid, tincture of iodine, washing powder, etc. This treatment is esophagoscopic using the graduated bougies. In cases of extreme emaciation or water hunger gastrostomy is indicated at once,

which is followed by a period of rest for the esophagus, then retrograde esophageal bouginage is begun.

*Hematemesis.* The etiology of hematemesis is carcinoma, tuberculosis, gastric ulcer, ulcer of the esophagus, varicosities, foreign bodies, aneurysm, and benign tumors, etc. Here as elsewhere the whole field of inferential methods of diagnosis are subject to a large per cent. of error, as the source of blood may come from the tracheo-bronchial tree or the larynx and be swallowed before it is regurgitated.

*Malignancy.* Rare in the tracheo-bronchial tree or lungs but more common in the esophagus or stomach. Malignant disease of the esophagus is characterized by fixation, and continued resistance to the onward passage of the esophagoscope. It also has its peculiar x-ray and fluoroscopic findings. The mucous membrane may or may not be involved. If it is involved the taking of a specimen is indicated for diagnosis. Blind methods of treatment are especially contraindicated in the esophagus. Guisez says "sooner or later all patients are killed with the esophageal bougie if the blind method is used."

Spasm of the esophagus:

(a) Cricopharyngeal spasm.

(b) Cardiospasm.

Most of the cricopharyngeal spasmodic cases are unassociated with the feeling of a lump arising in the throat, called globus hystericus, and have no association with hysteria. The esophagoscopic appearance of cricopharyngeal spasm may not be any different from normal cricopharyngeal spasm on introduction of esophagoscope.

Cricopharyngeal spasm is due to functional neurosis or organic pathology of chest or esophagus. The treatment of functional cases consist of dilatation and the treatment of cases with an organic base consist of removing organic cause, near or remote.

Cardiospasm occurs at the level of the diaphragm and is phrenospasm according to Dr. Chevalier Jackson, or as he now believes is more of a failure of the esophagus to open than a spasm. The dilatation of the peristaltic wave is absent.

The etiology is functional or organic disease. The organic disease is either near or remote.

The diagnosis of cardiospasm is made by the esophagoscope, the x-ray and fluoroscope.

In carcinoma of the esophagus one either sees

the growth and takes a specimen for microscopic examination or if the mucous membrane is not involved the esophagoscope meets fixation of the esophagus and continued resistance through the constricted area; while in cardiospasm the whole area of closure of esophagus opens at once, with only normal resistance.

The treatment of cardiospasm of the functional type is dilatation by the passing of an esophagoscope. The treatment of cardiospasm caused by an organic base is removal of an organic base.

## ECONOMICS IN ROENTGENOLOGY

CHAIRMAN'S ADDRESS, SECTION ON RADIOLOGY.

EDW. S. BLAINE, M. D.

CHICAGO

Fellow roentgenologists, radiologists, ladies and gentlemen—We are assembled together as the section on radiology of the Illinois State Medical Society, newly created by the House of Delegates. This occasion marks the opening of the initial session of the section and your Chairman looks forward with confidence to a successful, interesting and profitable meeting to those in attendance whose special interest is that of x-ray and radium practice in medicine and surgery.

The creation of this section of the Illinois State Medical Society in response to representations made by members engaged in these specialties constitutes, in a measure, a recognition of the important place that x-ray and radium occupy in the modern practice of medicine. It is fitting that this evidence of increased appreciation of the part that the roentgenologist and radiologist play in the diagnosis and treatment of disease has culminated in the formation of this Section on Radiology. Here the results of scientific endeavor and individual experience in these specialties may be presented in satisfactory form for the dissemination of information leading to the enhancement of diagnostic and therapeutic values to the ultimate recipient, the patient.

In these introductory remarks, a few words concerning certain phases of the economics relative to the practicing roentgenologist seem timely. The earliest x-ray workers were electricians, partly because of the nature of the apparatus necessary in the production of the x-ray

and partly because the average physician of the late nineties had little or no experience with electrical contrivances. But it was soon evident that, in its application to the human individual, normal and abnormal, this work must be done by a physician and not by a layman, inasmuch as the end product of the procedure is a medical opinion based on x-ray shadows. The x-ray film or plate was a necessity but was only incidental to the report of its indications in terms of anatomical conditions, normal or pathological.

In some quarters the physician roentgenologist was and sometimes still is looked upon by the practicing physician as a technician who produces x-ray pictures per se and not, as he should be, a medical consultant who assists in arriving at a diagnosis by the aid of the x-ray. In other quarters the referring physician and surgeon still patronizes the lay x-ray operator often unwittingly, not realizing that they are sending their patients who require this medical procedure to one outside of the profession, forgetting that the term "x-ray examination" in its generally accepted significance means an x-ray study and interpretation, not x-ray pictures, per se.

A roentgenologist or radiologist worthy of the name is first of all a physician graduated and accredited after several years of medical study who has prepared himself in the intricacies of the technique of x-ray physics, has become skillful in the care and handling of x-ray apparatus and has become proficient in the interpretation of x-ray shadows on the finished films or the fluoroscopic screen.

He inspires the confidence of the referring physician in proportion to the accuracy of his shadow interpretations as checked up by operative or post-mortem findings and his reports are entitled to the same consideration that is accorded the report of the pathologist or other medical specialist of like standing.

The day is passing in which the physician judges the ability and value of the roentgenologist by the photographic quality of the x-ray films that he produces, and the sending of patients to lay x-ray operators and technicians is fast declining because it is becoming more and more evident that this is as irregular a practice as is the sending of patients to lay bone setters, chiropractors and the like, and is fully as reprehensible.

The dictum may be made that no x-ray inter-

\*Read before the Section on Radiology, Illinois Medical Society, Moline, Illinois, May 31, 1927.



pretations should be made by a layman and no physician should accept such a report. In hospitals of small size in small communities it is not practical for a specialist in roentgenology to locate. In such cases all x-ray films should be sent to a consultant roentgenologist for interpretation at the nearest medical center. Small hospitals in large cities manifestly cannot profitably engage the full time services of competent physician-roentgenologists, but they can obtain part time attendance, or can send the x-ray films to the roentgenologist's office for interpretation. Thus the roentgenologist is just as close as is the postman with but a small delay in time. Emergency interpretations can be made by the physician on the case particularly as the more recent graduate in medicine has been given general instruction in x-ray interpretation.

When all physicians realize the economical error of sending their patients who need x-ray studies or treatments to laymen and lay operated commercial x-ray laboratories, then and then only will these interlopers in the medical profession cease to exist as such for they cannot profit except by the direct assistance and support of the referring physician. If all physicians will recognize the true ethical situation and thus decline to send any of their patients to a layman x-ray technician, the commercial x-ray lay operated laboratories will cease to exist.

When this happy condition comes to pass, then will we see the young physician of ability who prepares himself for this specialty make the progress that is now often denied him because the referring physician continues to support the layman. It has several times occurred that deserving and well qualified young physicians, were denied the support to which they were entitled by their medical confreres who continued their support of lay x-ray operators whose income tax returns so often reveal a large patronage which can only come from the practicing physician. The busy roentgenologist cannot perform all the technical details of the routine x-ray work; therefore this phase must be done by lay technicians trained for the work. These technicians are most often recruited from allied medical workers such as trained nurses. That they are necessary in proper x-ray procedures is undebatable and they should be of the highest skill possible in order to assure the best technical results, but a sharp delimi-

tation occurs, namely, the interpretation of the x-ray film, which actually is a medical diagnostic procedure within the meaning of the term "practice of medicine." The highest type of x-ray technician will decline to make an interpretation or give an oral or written opinion on any x-ray films, because he knows that if he does so, he is competing with the physician-roentgenologist who oftentimes was his teacher and frequently is his employer. Many physician-roentgenologists of high repute prefer x-ray technicians who are registered with the "American Registry of Radiological Technicians," each one of whom signs an agreement "not to do x-ray work independently or to give oral or written diagnosis and to work only under a physician in good standing." If all roentgenologists would engage the services of only registered technicians this spectre of competition by those he has himself trained to proficiency will no longer confront us.

Another phase in the economics of roentgenology which is slowly undergoing a change is the sending of patients for x-ray services where the fees are the cheapest. In many such instances the referring physician does not appear to be concerned whether his patient will receive the best possible medical roentgenological assistance obtainable only by thorough and at times extended x-ray study, or whether the interpretation is backed by large experience and proven ability. The lay operated x-ray laboratory which so often offers rebates to the referring physician is but a degree less guilty than he who sends his patient to such places.

Thorough x-ray examination requires the use of much costly material and valuable time. Cheap fees result in restricting the service to the patient who thus is the loser. The conscientious physician having his patients' best interest at heart, will not make this error.

The formation of this section on radiology brings the practice of x-ray and radium into the foreground in Illinois medical activities. The roentgenologists (radiologists) of Illinois will be found to be quite alive to the opportunity afforded them to demonstrate the qualifications to meet with other specialties which have been similarly recognized as important branches of medical practice.

5 South Wabash Avenue.

## SALIVARY CALCULI\*

JAMES E. LEBENSOHN, M. D., F. A. C. S.,  
CHICAGO

In disorders due to salivary calculi, the diagnosis can generally be easily made, if the possibility of this condition be only kept in mind. However, these cases, though not uncommon, are seen so infrequently, that they often are not recognized until after the patient has been tormented by much needless suffering, as is illustrated in the following experience:

Case 1. A male, age 22, consulted his family physician because of pain in eating and swallowing. A swelling below the left angle of the jaw was noted and attributed to pharyngeal infection. After eight days, the patient was referred to my attention, as his discomfort in the meantime had become exceedingly severe. No cause for his trouble could be located in the nasopharynx. An adenoid pad was present, and remnants of tonsillar tissue, but neither displayed any inflammatory reaction. The patient was next directed to tilt his tongue upward, when pus was seen oozing from the papilla of the left Wharton's duct, which increased in quantity on pressing the swelling at the jaw angle. The duct region was very much swollen by inflammatory edema, and no stones could be felt with the finger. I made a presumptive diagnosis of infection of the duct and submaxillary salivary gland, secondary to a calculus, and decided on an exploratory incision of the duct. Had this failed to reveal stones, the more formidable procedure of resection of the submaxillary salivary gland would have been indicated. An x-ray would have been valuable to confirm my diagnosis, and would have been ordered, if complete success had not attended the duct incision. Cocaine 10 per cent was applied over the duct, and a little novocain injected over its course. Instruments designed for use in lachrymal duct operations were found very suitable. A Critchett's grooved probe was introduced in the duct, and the incision made over it with a Graefe knife. A lachrymal probe introduced through the proximal end of the incision clinked on a calculus. With a small lachrymal curet and finger pressure, eight calculi, faceted and about the size of cherry stones were removed, together with considerable gravel. Immediate relief from tension was experienced; pus discharged from the wound for three days, and uneventful recovery followed.

The following two cases had also, previous to my examination, been diagnosed and treated as submaxillary lymphadenitis:

Case 2. A woman, aged 30, had had coryza with some ear pains, and shortly afterward noted a swelling under the tongue, associated with a swelling in the right submaxillary region. The patient consulted

me after these swellings had persisted for three weeks. The nose and ears were at that time negative. A marble like swelling was present near the papilla of the right Wharton's duct. The right papilla was more patulous than the left, and the stain of mercurochrome stayed on it longer also. A diagnosis of salivary calculus was made. It was easily extracted by a linear incision, and manipulation with finger pressure and a tiny spoon curet. The stone, which I fortunately kept as a specimen and am now presenting, was 1.5 cm. long, and 0.8 cm. in diameter, and shows on one aspect the impression of the duct. On the day following the operation, the patient reported complete comfort.

Case 3. In 1923, while I was associated with the U. S. Veterans Hospital at Maywood, a man, aged 26, was referred from the medical wards for a persisting, painful submaxillary gland enlargement. This enlargement varied in size from time to time, and was particularly troublesome at meals. On examination, a granule was visible at the mouth of the left Wharton's duct. By finger expression, the duct was emptied of 5 tiny stones. No incision was necessary and complete recovery followed.

The relation of the glandular enlargement to meals is not always remarked by the patient. In a case of calculus in Stenson's duct, this symptom was so definite as to enable me to make the diagnosis on the history:

Case 4. In 1917, a sailor on the U.S.S. South Carolina came to sick-bay complaining of a painful enlargement of the right cheek after meals. My finger inside the mouth readily felt a small calculus near the papilla of Stenson's duct, which was easily removed. Complete subsidence of symptoms followed.

Salivary calculi, otherwise known as sialiths, are formed about a nucleus of foreign matter that has found lodgment in the duct. This nucleus may be a colony of the mouth fungus, *leptothrix buccalis*. The submaxillary salivary gland is most often affected, the parotid next, and least frequently, the lingual. The stones are composed mainly of the carbonate and phosphate salts of calcium. Cases have been reported in which the calculi have weighed as much as 34 gm., and 67 gm. respectively.

The symptoms vary. In some patients there are periodic attacks of pain, increased by mastication (especially when acid food is taken), with no discomfort in the intervals. When secondary infection of the duct and gland take place, there is extreme pain, and marked induration.

Conditions due to salivary calculi have been mistaken for simple lymphadenitis, actinomycosis, Ludwig's angina, mumps, and dental root

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abscess. However, careful inspection of the puncta and ducts of the salivary glands, assisted by digital examination and sounds, will generally make the diagnosis. In cases of doubt an x-ray should be taken.

The treatment is purely surgical.

25 E. Washington St.

#### DISCUSSION

Dr. C. F. Yerger, Chicago: My experience with salivary calculi has been limited to seven cases; four were calculi in the submaxillary gland proper, two were lodged in the duct of the submaxillary gland and one was in the parotid gland. The incidence of salivary calculi is very much greater in the submaxillary gland and duct than in the parotid gland and duct. In one of the cases the stone in the submaxillary duct was removed spontaneously through the wall of the duct by the process of pressure necrosis and ulceration.

The treatment of these cases is very simple in the cases of calculi in the salivary ducts, by incision and removal of the stone; it is not so easy, however, when the calculus is lodged in the gland; in the later case there is usually associated infection and more or less destruction of the gland structure. This must be attacked from the outside, the sequelae of which may be an unsightly cicatrix, facial paralysis or salivary fistula. Where it is possible to remove the gland in toto as with the submaxillary, this should be done; in the case of the parotid gland, this cannot be done without a resulting facial paralysis; in these cases it is better not to attempt complete extirpation of the parotid gland, but simply remove the stone and treat the subsequent salivary fistula.

Dr. J. E. Lebensohn, Chicago: I am very happy that my paper has been so ably discussed. In the case of multiple stones mentioned, I think they were close to the gland substance. I had to pass the probe quite deeply into the end of the duct before they were removed. The stone assumes the size and shape of duct and may be fully two inches long and show a definite impression of the duct. The resection of the submaxillary gland offers no difficulty except that the nerves on the floor of the mouth must be avoided.

#### THE PROSTATE AS A SITE OF FOCAL INFECTION\*

JAMES V. BEYNON, M. D.

ROCKFORD, ILLINOIS

In the presentation of this paper I make no pretense of presenting any new procedure in the treatment or diagnosis of the prostate but merely present it as a correlation of facts that are of common knowledge to those specializing along

these lines, but strange to relate they are facts that are sadly overlooked every day by those engaged in general work or in lines other than that of urology.

No doubt most of you know just how many tonsils your patients have in the place where a great many more should be, but how many of you can truthfully state the exact condition of the prostate in 5% of your male patients and more so the condition of the prostate of those who present a picture of focal infection.

When I speak of the prostate I have in mind also the seminal vesicle, for the two are so intimately associated that one very seldom finds a case without co-existent disturbances, and what I have to say regarding the prostate applies almost throughout to its conspirator in the production of systemic disease.

When in search for localization of focal infection in the male, every male over the age of sixteen must be considered a potential candidate for prostatitis, and no case of suspected focal infection in the male can be said to have had a thorough and proper consideration of all possible focal infection localizations until the prostate has proven itself innocent or guilty.

Do not misunderstand me and think that I believe you must insert your finger into every male rectum venturing into your office, but do consider the prostate in every obscure blind case.

Quite frequently one questions the real significance of the focal infection theory when you experience a case in which you have removed or advised the removal of all of the more common parts of the human anatomy wherein focal infections usually repose and after you have separated your patient from the tonsils, teeth, appendix, etc., you are discouraged and your patient disgusted and disgruntled.

So it seems that we must look further or might I say deeper or lower for new sites of focal infection in obscure cases and to get to the bottom we must go to the seat—I am speaking literally now, for often a rectal examination may reveal the offending part in the prostate gland which heretofore has escaped accusation.

And again in cases with positive findings elsewhere which improve temporarily after cleaning up the same, the prostate will be found quite frequently playing the role of the second offender due to a prostatitic infection having localized

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through a metastatic infection transmission prior to the cleaning up of the original infection, and persisting after the disposal of the same.

Prostatitis is more prevalent than is usually considered, being estimated at about 35% of all males, while Hugh Young states that it is as prevalent as gonorrheal urethritis which would of course bring it up to a much higher percentage.

In a case where there exists a definite history of venereal disease, which if truthfully given, would be more frequent, the prostate is more readily considered, but unfortunately, quite a number of infected prostates give no history, and truthfully so, of venereal infection, and surprisingly show a chronic prostatitis which when eliminated proves itself to have been the site of a deep-seated and obscure focal infection—in the Mayo Clinic, 1,627 patients afflicted with chronic prostatitis, 76% gave a positive history, 4% had an indefinite history, and 20% emphatically denied any previous venereal history.

In a case where a focal infection has not yet been ferreted out, one must look into the history in an attempt to find a basis for a prostatic localization, and accordingly must recall for consideration the more common etiological factors in the production of a condition which would cause the prostate to be less resistant to the localization of foci of infection.

So may I be pardoned if I hurriedly run over a few of the most common mentioned factors:

- (a) Urethritis
  - 1 Specific or G. C.
  - 2 Non-specific.
- (b) Infectious diseases
  - Influenza, Pneumonia, Typhoid.
- (c) Metastatic infections from remote foci.
- (d) Contact
  - 1 Through bowel wall.
  - 2 Through Bladder.
- (e) Sexual abuses
  - Excessive normal act.
  - Perversion.
  - Unsatisfied erections.
- (f) Age
  - Pre-prostatic age.

(a) Urethritis:

- 1. Specific or G. C.

Of course a history of positive venereal infection is of considerable aid in weighing the prostate as a focal infection site, and naturally more so if the history is of a recent one, but one must also bear in mind that a gonorrheal infec-

tion may remain latent for some time and suddenly flare up as a true gonorrheal infection, or more likely as a mixed infection minus the gonococcus.

2. Non-specific.

This type is a common type in a urological practice and very frequently is overlooked because of the negative history of venereal disease or illegitimate sexual intercourse.

(a) Often due to coitus with a wife afflicted with a severe non-specific vaginitis, an erosion of the cervix or a carcinomatous involvement of those parts.

(b) Due to trauma—self-induced by masturbation or by the passage of catheters or other instrumentation.

(c) Due to descending infection of the upper renal tract which is rare as the urethra is especially resistant to such infections.

(b) Infectious diseases: Influenza, pneumonia, typhoid, septicemia, etc.—these no doubt are transmitted through the hematogenous route, although this theory is still in dispute with the pendulum swinging toward its acceptance.

(c) Metastatic infections from remote foci:

1. Lymphatics.

Furniss has shown that urological infections are most common after intestinal operations, and no doubt due to the close lymphatic association.

2. Hematogenous:

Rosenow and his co-workers have reported the reduplication of various urological lesions in animals by the intravenous injections of organisms obtained from dental abscesses, tonsils, sinuses—not only producing analagous lesions in the animals but by injecting the secretion of the prostate of afflicted patients produced the arthritic and other lesions in the animals analagous to those of the patient from whom the prostatic secretion was obtained.

Young believes that the cocci infections of the prostate are more liable to be associated with foci of the head (teeth, tonsils, sinuses, etc.) while the bacillary type is more likely to be traced to the alimentary tract.

(d) Contact:

1. The infection may travel through the bladder wall, but it is usually at the site of a severe inflammatory condition.

2. Through the bowel wall.

The question of the transmission through the



bowel wall would seem to be easily answered, but Von Laeuen and Stuhler at the Mayo Clinic in a series of many thousand male patients who in the course of the clinical examination gave evidence of chronic constipation, and upon being referred to the Urological Section for a prostatic checkup, showed only the usual percentage of involvement of the prostate and with it also other possible sources of infection which appeared to be more likely to be the fountain of the prostatic condition.

Hertz-Boyer found Colon bacilli in urine which he believed to be due to lymphatic transmission in cases of decreased intestinal motility, rather than through direct contiguous passage—this belief being based on the anatomical relationship between the affected parts.

(e) Sexual abuses:

Any sexual act, whether normal or perverted, which permits a prolonged engorgement of the prostate, e. g., delayed ejaculation, withdrawal, excessive repetition, masturbation, unsatisfied erections, etc., all work to lower the resistance of the gland.

(f) Age:

Males nearing the age of forty or so undergo certain metabolic changes which may be recognized as those for which we can coin the phrase "preprostatic age"—we all of course admit of no definite sexual cycle for the male, but at the age mentioned certain body changes do go to make up a condition that predisposes towards prostatic pathology.

Bacteriology:

Staphylococcus and Colon Bacillus showed a marked frequency in the organisms obtained from secretion of chronic prostates while the Gonococcus was present in only one per cent. of the cases, but due allowance must be made for the fact that the Gonococcus is well nigh impossible to demonstrate microscopically in chronic cases, as the organism dies in a comparatively short time, some authorities state three years, but it disappears leaving an associated organism usually staphylococcus to continue as the etiological factor in the chronic prostate.

The so-called "sterile" inflammations of the prostate are not to be accepted as a more thorough search will reveal the offending organism in these cases.

Hill in his work at Brady Institute in an ex-

amination of 100 cases of prostatitis gave the following results:

30% of cases showed urine and prostatic smears negative with cultures of same also negative.

30% of cases showed urine and prostatic smears negative with cultures from one or both showed positive for organism.

40% of cases showed positive organism either in urine or prostatic smears or both with positive cultures in every case.

Symptoms may be absent entirely due to drainage into prostatic urethra, but when drainage ceases the picture of focal infection ensues.

(a) Cases with symptoms definitely referable to prostate constituted 78% of cases and under this head were:

- Urethral discharge
- Perineal discomfort
- Premature ejaculation
- Supra-public discomfort
- Morning drop
- Testicular neuralgia, etc.
- Difficult urination
- Painful urination
- Hematuria

(b) Cases with remote general complaints frequently associated with prostatitis which constituted 22% of the cases:

Myalgia and arthritis, especially in sacral regions and lower limbs.

Remote abdominal symptoms.

Often inguinal tenderness and mistaken for signs of an inguinal hernia.

Gastric and duodenal ulcers, especially in prostatitis, 1 & 2 are reported in Mayo clinic frequently.

Sexual disturbances:

Due to close association of sexual organs with central and sympathetic systems.

Mental disturbances producing pronounced psychic signs and often melancholia.

Nervous symptoms.

These nervous signs are very important and demand early recognition.

Malaise and ill-defined headaches.

Eye conditions, chiefly iritis.

Anemias, loss of weight, appetite and other evidences of focal infection.

*Diagnosis:* In making a laboratory diagnosis of chronic prostatitis the classification of Von Laeuen is no doubt the most logical and popular today.

After expressing the prostatic secretion by a vigorous massage it is placed on a glass slide, covered with a cover slip and examined unstained with the dry, high power lens.

Laeuen

A field showing from five to eight pus cells is considered normal with the other classifications as follows:

Prostatitis I Eight to fifteen pus cells.

Prostatitis II Fifteen to fifty pus cells.

Prostatitis III Fifty to one hundred and fifty pus cells.

Prostatitis IV One hundred and fifty, and over.

Other pathological findings are noted, but the above with the findings of clumps of cells, which are absolutely diagnostic, are sufficient for a working basis—1% acetic acid will bring out nuclei.

Findings in men well over fifty years of age must of course be accepted cautiously as degenerated epithelial cells and an increase in the number of leucocytes is very common at that age.

The earlier method of Lowsley with the irrigation of the urethra with permanganate, the passage of the urethroscope preceded by a prostatic massage and the gathering of the secretion on the end of the endoscope is now replaced by merely swabbing the penis and gathering the secretion direct on the glass slide.

Culture of the expressed prostatic secretion is a very useful and thorough method in diagnosis in a great many mild and obscure cases—supplemented with animal inoculation.

Rectal findings in prostatitis:

The rectal examination will in a way modify the above as a rectal examination revealing a larger than normal prostate with a boggy or evidence of softening in spots will indicate a withholding of the findings until a second microscopical examination on the day following is made.

Irregular induration and shrinkage as shown by loss of normal smoothness and regularity.

Changes in surrounding tissues with bands of scar tissue located usually on the upper and outer angles of the gland and the sulci between the gland and the inferior pubic rami.

In the hematogenous type of infection the gland is often normal in size and regularity, but is tender to the touch and the secretion is expressed with difficulty.

The so-called fibrous prostate will usually present urinary difficulties with the gland showing practically no rectal finding (25% of all cases) often gives no urinary signs and much more depends upon the microscopical findings.

Von Laucken quite frequently employs provo-

cative tests in his examination where an obscure, deep-seated prostatic infection is suspected and does not readily manifest itself in the microscopical examination—the massage is supplemented with the passing of sounds into the prostatic urethra followed with instillation of 1% silver nitrate and occasionally the Kohlman dilator is employed as a provocative measure.

The urethroscope will demonstrate polypoid growths posterior to verumontanum.

*Treatment:* In the treatment of this condition, needless to say, the removal of a co-existing focus, if one is present, is paramount and then the treatment is directed toward the prostate.

In the prostatic type one cases, the treatment is sufficient with daily sitz baths or the use of the rectal irrigators, one of which is the Arzbuerger which comes in two types—one provides for a closed stream of hot water with the prostatic sound close to the posterior surface of the prostate, and another not so efficient, but a trifle easier to employ with an electrically heated unit—these applications are of one-half hour duration, and are given night and morning if severe symptoms warrant, or every other day in mild cases.

In cases of greater severity the rectal thermophor mentioned above is used, and with it the following:

Harrison of St. Thomas Hospital, London, is reporting wonderful results in these cases with diathermy and believes it is without a peer in the management of this condition—treatments are given on alternate days for twenty minutes, and are controlled by temperature readings with the desired temperature of the prostate at approximately 108 F.

Massage on alternate days followed with bladder irrigation.

Urethral dilation (Prostatic) with Kohlman dilator on the fifth day and followed with instillation of silver nitrate of 1%.

Vaccine treatment, preferably autogenous.

Protein shock injections.

Cauterization of growths through the urethroscope.

Young thinks that in cases of obscure focal infection (including prostate cases) that the various new dye germicides such as acriflavine, mercurochrome, etc., should be tried either locally or intravenous in an effort to learn just what they accomplish.

In cases which present desperate pictures as seen occasionally in endocarditis, arthritis or a chronic rheumatic picture of a disabling character, that one is justified in cutting down on the prostate, making



an incision into the prostate, and if upon examination of the smear obtained thus, bacteria are demonstrated that further procedure is justified in excising a portion of the prostate in each lateral lobe and packing the cavity to maintain drainage.

Lazarus, of New York, using an x-ray therapy, has achieved some brilliant results—the prostatic secretion has a lessened or normal pus cell count, although the rectal findings are not changed, but nevertheless he believes that the x-ray mechanism is not that of a sterilization of the prostatic focus.

When have we a cure? for one must not judge a case as a “cure” with the subsidence of the focal infection symptoms, nor the diminished size of the prostate, but it must fulfill the following:

- (a) Normal prostate per rectum.
- (b) Normal prostatic urethra and verumontanum.
- (c) Prostatic fluid free of pus cells and sterile on culture.
- (d) Evidence of clean bill of health for seminal vesicles.
- (e) Absence of focal infection symptoms.

The prognosis as a rule is good in cases where the prostate is the lone offender and the treatment faithfully and thoroughly carried out—the method of treatment is necessarily a long one, but in the end good results are the rule.

Conclusions:

Prostatitis is more common than usually supposed.

The prostate is not receiving the attention due it in male examinations, especially focal infection suspects.

The diagnosis is easy in its technique and demands an office procedure only as a rule.

The treatment must be painstaking, thorough and prolonged.

Manufacturers Bank Building.

#### DISCUSSION

Dr. Frank Deneen, Bloomington: This is probably the most neglected field in the department of internal medicine, that is, the examination of the prostate and seminal vesicles. It is probably neglected for two reasons. One reason is that it is rather distasteful work; and the second is that it requires a rather long slender finger to really examine the prostate and seminal vesicles. To me it is not just a question of prostate but practically all cases are prostate and seminal vesicles combined.

There are a large number of cases that come into your office with weakness, exhaustion, a tired feeling, and you can't find out just what is wrong with them. I believe every one of these cases should be gone through with a rectal examination the same as you examine the heart and lungs. There is no doubt in my mind that many of the so-called in-

cipient tuberculosis cases are nothing more than low grade prostatic infection. The one I see most frequently is the post-influenza type. It is purely hemogenous. Most of them have secondary anemias.

I recently had a man who for about three years was sick, weak, tired, worn out; and he would go from one place to another in search of relief. I remember examining his prostate and seminal vesicles at one time and with no apparent findings. He went to Boston and a couple of men there classed him as a case of nerve exhaustion. Another man wanted to do a sphenoid operation. One day he developed the characteristic backache. We massaged his prostate and seminal vesicles and he has cleared up.

I cannot help but believe that all this time he had a low grade infection with absorption going on, without digital findings. We could not find it. There is no doubt that this condition occurs around the age of 55, the age when the male ceases having the usual run of intercourse and there is more or less stagnation of secretions there. He gradually gets absorption of these secretions and they will form a focus or good soil for the organisms to grow in.

Personally I do not believe in the specificity of infection. I do not believe there is any organism that is specific for one type of tissue or another type of tissue. We know from bacteriology that with certain media on certain soil certain organisms will grow better than in any other location.

Where you have a stagnation of secretion it is perfectly natural that any organism will grow better in that medium than it will where there is a constant drainage because in that stagnation there are undoubtedly chemical changes taking place, and all that gives rise to infection and absorption.

In my experience the prostate and seminal vesicles belong in the field of internal medicine because they belong in the field of diagnosis. I believe that every time you have a case presenting any form of low grade infection or absorption, whether infectious or chemical, you should perform an expression of the prostate and the seminal vesicles; and you will be surprised how many backaches you will relieve, how many obscure pains that the patient complained of in the appendiceal region, also upon the left side. In my experience they have been more on the right side. Many of them have had the appendix taken out as a chronic appendix.

You get relief for that patient with the first massage and it will return; but, after a few days of massaging, your patient will be stronger and better and relieved of the obscure pains.

I believe, as a focus of infection, that the prostate is the most important and most easily relieved.

Dr. James Beynon, Rockford (closing): I would like to take this opportunity of stressing the therapeutics of the chronic prostate for it presents an opportunity for your favorite therapy no matter what that may be for as I stated before even the surgeon comes in for his share of credit in relieving the chronic prostate.

Of all the various methods of treating the chronic prostate massage stands preeminent and by it alone you can relieve approximately 75 per cent of the cases but do not use the strenuous methods so many employ inflicting unnecessary discomfort and pain on the patient but be gentle for gentle massage will stimulate the contracting power of the gland to as good a result as will the severe mechanical expression of the secretion.

Rolling the finger while passing in the direction of an arc with the anus as the pivoting point will also be less tiresome to the operator and will really accomplish much more of the desired effect and while I am speaking of the emptying of the prostate the question of sexual intercourse comes up—I believe that a normal sexual act bi-weekly in these cases is of some therapeutic value.

As Dr. Deneen said you can see an improvement almost at the institution of proper treatment but you must insist upon a prolonged and thorough course to obtain results and with a correct diagnosis, a thorough and intelligent procedure you will convert a skeptical, discouraged and sick man into a very gratified and well patient in practically all cases.

## THE CARE OF THE CANCER PATIENT\*

E. G. C. WILLIAMS, M. D.,

DANVILLE, ILL.

In medical schools students are taught to treat diseases. This generally continues through internships where patients have lost their identity as individuals and are known as case numbers. It is usually only after some years of actual practice that the physician learns to treat patients as individuals and modify his treatment or conduct to fit the special mental and physical qualities of each patient. In spite of the many romances that have been built around the idea of doubles or persons who are exactly alike, we know that no two people are exactly alike and that these stories are truly romances. Individuality submerges type.

In the care of the cancer patient there are three phases of treatment that must be considered with each patient. In many cases all these do not demand close application and in some only one need be considered.

The first phase is the treatment of the cancerous lesion. This is not the time and place to talk in detail about the treatment of cancer. But since the patient and not the disease is under consideration, we will generalize on the points

that contribute the most toward our ultimate end—a cured and rehabilitated patient. The most conservative thing we can do is usually also the most radical. This condition grants no privilege to temporize or to try this or that pet idea and wait to see if it will work. The lesion must be destroyed and whatever method we use must be completed in the shortest possible time. If we use radium, let it be enough at one or two treatments to stop and destroy the disease. If we use surgery, let us make a complete resection of the mass at one time and not be so jealous of our surgical importance that we will not call the radiologist in consultation before surgery is done. To call him after surgery is done is unfair and handicaps him in his earnest desire to co-operate with the surgeon. It is a notable fact that the surgeon is called in consultation by the radiologist much oftener than the radiologist is called by the surgeon. Let us be radically conservative and foster a close co-operation between all who are interested in the welfare of the cancer patient.

The second phase covers the general physical care of the patient. The importance of this depends very much upon the location and seriousness of the lesion. With the small superficial lesion there is very little constitutional effect from the treatment with very little demand for constitutional treatment, but as the amount of tissue to be destroyed increases and in the case of deep seated cancer the care of the general health is as important as the eradication of the malignancy. When the treatment is surgical, the patients usually have this attention in the preparatory and post operative treatment, at least while they are in the hospital but are often sent home without a definite program for rehabilitation. X-ray, radium and electro-coagulation are used to destroy tissue which is usually left in position until it is absorbed or sloughed and very often we overlook the fact that this has become foreign material and that the absorption produces more or less toxemia in carrying the waste to the excretory organs. The cancer has most probably been cured but the patient may be poisoned by the waste products and die during the cure. The condition produced may be classed as an acidosis and treatment should be outlined accordingly.

Diet must be so ordered that the patient will

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receive a good quantity of constructive food with complete removal of the acid-producing items. This is practically a nephritis diet. Immediately following a massive x-ray or radium dosage all food is withdrawn for at least twelve hours and the patient is advised to remain in bed. We have found that the greater part of Roentgen sickness is due to bad air in the therapy room and scattered or secondary radiation—with the correction of these faults, reactions have become less severe.

I do not wish to give a detailed program for the care of these patients but to emphasize the necessity of caring for the patient while we are treating a cancer.

The third phase concerns the psychic state or attitude of the patient. The production and maintenance of a proper state of mind is about as important as the physical treatment.

The psychic treatment of cancer patients should be started long before the patient ever develops cancer. Educational work should be carried out as thoroughly as the tuberculosis education has been done. The tuberculosis patient knows that "Tuberculosis is a preventable and curable disease." He knew this before he developed the disease. His mental state was prepared and he was ready to make the fight as soon as the diagnosis was made. He had been taught that to the consistent fighter, victory over tuberculosis is usually sure.

In the production of a similar attitude toward cancer, we must concentrate on a few special points and give them to the lay world at every opportunity—such statements as:

"Every cancer is curable when treated soon enough."

"Cancer is curable if not neglected too long."

"Early diagnosis and immediate treatment will cure cancer."

"Cancer is curable—don't wait."

If a person who develops a suspicious lesion has been properly informed concerning the curability of cancer, he will go to his physician and calmly and intelligently co-operate with him to effect a cure. But the person who lacks knowledge makes a hard patient. He is usually saturated with superstitions and false ideas. He feels that he should have gone to an Indian cancer specialist who uses a mystic paste and charm. This patient is restless, antagonistic and usually certain that all cancer patients die horrible

deaths. These people are susceptible to any sort of ridiculous hokum that comes from outside the profession and sometimes from within.

Everything else being equal, the well instructed patient has a better prognosis than the ignorant superstitious one.

Over nine years ago, we gave an unfavorable prognosis to a woman with a recurrent mammary cancer. She replied "If you mean that I am going to die, you will have to make other arrangements—I have no time to die. Whatever you want to do, do it. Whatever you want me to do, order it. But I will not die." She is alive and well. She was well informed, not afraid and willing to co-operate.

A few months ago a man presented with a small lesion on his neck. It was proven to be epithelioma. When he was told it was cancer, he fainted and his daughter went into hysterics. The mass was coagulated and promptly healed but the man was sure it would break out some place else and kill him. He grieved over himself—lost weight, the lesion healed—he knew it would come back—and he died—his early information concerning cancer was that it always killed. He had no hope, no faith and no determination to get well.

With a background of intelligence and proper information it is easy to produce a psychic state that assists in the treatment and care of the cancer patient. Mental depression carries with it physical depression, lowered resistance and decline. Mental exaltation, determination and confidence speed up body processes and bridge gulfs that swallow the weak of faith.

Different patients demand different means to produce this desirable state of cheerfulness and determination. In many cases the co-operation of the friends and family is necessary. First of all, the patient and one member of the immediate family must know the true nature of the condition, the extent of the lesion and the possible prognosis. I use the word cancer in preference to carcinoma, malignancy, epithelioma or anything else that might be a sugar coating to a bitter dose. Cancer is an ugly word and conveys more to the patient than any of the others, and soon you will see from the reaction of the patient how much co-operation you can get and how much he can be depended upon to do his part. It is a mistake to hide the diagnosis from the patient

and the physician who does this gets censured for it sooner or later.

Give the patient the prognosis—as liberal as you dare and accompany it with a demand on their co-operation—that a great part of the cure is in their determination to get well and to live.

Give the patient something definite to do every day and increase the amount to be done according to the patient—almost anything to keep them feeling that every day's program is a vital part of their cure and do not leave them to wonder and worry why something is not being done. Ultra-violet radiation, sun baths, hot foot baths, electrical treatments—special foods for various days. In fact, anything that will build and contribute to the mental state of the patient.

We hope that nothing in this talk can be interpreted as a proposal for the psychic treatment of cancer. Some of our Christian Science contemporaries would quickly seize such an interpretation and distort it to fit their own way of thinking. Details have been avoided as each case must have special consideration. We have been brief in order that the discussion may have plenty of time.

#### DISCUSSION

Dr. R. T. Pettit, Ottawa, Illinois: The definition of the carcinoma is that it is a non-inflammatory new growth. I think our tendency is to think of carcinoma as being essentially a local growth. But we are warranted in assuming that it is something more than this. Cancer is in itself a disease. We don't know the etiology of it. It may be infection; it may be of hereditary origin; some disturbance of the cell metabolism, oxidation or other derangement. Some time we are going to know, but we have enough evidence at hand today to warrant us in believing carcinoma is a disease.

I had an opportunity five years ago to visit Dr. Blumenthal in charge of the Cancer Research Institute in Berlin. He is strongly of the belief that carcinoma should be considered a disease as syphilis or as tuberculosis. We know that carcinoma can be limited in its growth by the stimulation of the production of fibrous tissue, the same as tuberculosis is limited and in the same way syphilis is limited, as well as destroying it by the methods Dr. Orndoff has mentioned.

In the meantime, we must take care of our patient the same as we do our case of syphilis or our case of tuberculosis, our surgical case, whatever it may be. I would like to call your attention to an arsenic preparation used by Dr. Blumenthal, atoxyl. It is used by him constantly in all cases. It has prac-

tically the same effect as cacodylate of soda given intravenously, except that it is not nearly as rapidly eliminated. It can be given in a series of about ten doses. In Berlin, they feel it has a decided advantage in the management of the carcinoma case. Fresh air, good food, blood transfusion, and arsenic medication have their bearing on building up the defense, the production of scar tissue, fibrosis, the thing we are after.

I would like to have somebody say something more about what ought to be our attitude in regard to telling the patient he has a cancer. I feel it ought to be done. We used to feel that a case of tuberculosis should be shielded and would tell him he had a "little lung trouble." Now we feel it is criminal not to tell a patient he has tuberculosis. In hopeless cases of carcinoma, should we tell them they have cancer? Or should we pussyfoot? I don't. We may go through the same evolution of thought we did regarding tuberculosis but we would probably get farther and do better work by putting the cards on the table and get the patient's cooperation and do things a whole lot better by telling the patient what is the matter and what is necessary for him to do. We cannot do it unless he knows what the trouble is.

Dr. T. D. Cantrall, Bloomington, Ill.: This paper is an important paper. It is a question about which I have been so emphatic sometimes that I have been criticized. Treating the disease and not the patient. I made this statement in connection with the last meeting which I attended in Milwaukee, "Too many of us are getting to be great radiologists and great surgeons and forgetting we are doctors; too many are inclined to one line of thought." I want to commend the paper very highly along that line.

I will speak only on one subject, and that is the subject the doctor mentioned last in the paper. Should the patient know what is the trouble? I say frankly he should know it unless it is an old decrepit patient where you have to depend upon cooperation through the family. I think sometimes in deference to their age and the childlike mind they have it would be wise to keep it from them, just the same as you wouldn't tell a child. I think some old people become children. But people of moderate life, I believe, should know absolutely what is the matter with them. I have a case now in charge that has been treated by one of the best radiologists in Chicago, carcinoma of the jaw. He has had some radium put in there. I believe if my friend, Dr. Beck, had had that fellow he would have had a chance to live. But I feel he has now gone too far. He failed to cooperate in his treatments. He was not prompt in coming to his radiologist. In fact so much so that the man who referred him to me called up and asked him if he was still continuing his treatments. He was brought to me under those conditions. The doctor said the family didn't want him to know what was the matter with him, and he called me out of the room to tell me they didn't want him to know



what was the matter with him. Yet he was not cooperating. He thought he had a boil on his jaw. There was a tumor about the size of a hen's egg that was ready to break down. I turned around. I didn't say a word to the doctor, but when he went out the door I said to the patient, "My friend, do you know we have really got a hard fight on our hands?"

He said, "I didn't know it."

I said, "You have an awfully bad cancer there, and you and I have to cooperate if we are ever to do anything for it."

He said, "Do you think that is cancer?"

I said, "I don't think anything about it. I know that is what is the matter with you."

He said, "I am glad to know it." And I have never had a better patient, never expect to have a better patient than he has been ever since. We are going to do as much as we can for him along that line now.

If I suggested he go to Dr. Beck, I know he would. He knows he has his back to the wall and has to fight and is willing to fight.

We must treat our patients as intelligent people and tell them what is the matter with them.

Dr. O. W. Allison, Danville, Ill.: I want to emphasize the diet. All our patients at this time, or practically every one of them, are in decline, so I want to emphasize the importance of a high vitamin diet. Almost all of the patients up to this time have been very careless in the diet, eating meat, potatoes, and gravy which are low in vitamin. By using fruits and vegetables, both cooked and raw, with limitation of proteins, I believe we will get better results.

Dr. E. G. C. Williams, Danville, Ill.: The assembly has been very kind, or has overlooked the trap that I laid for myself in this paper. In speaking of the two patients I said had cancer I referred to the woman with the breast cancer and how she cooperated and the man with cancer on the neck who immediately proceeded to waste away. There was the trap which I laid, and I rather expected that you would pick this up, because I told that in both cases they had cancer; one, a very serious case, responded with cooperation. The man's case was not so serious, didn't amount to anything much at first, but he was so certain it would be serious for him, with his background of superstition that he couldn't stand the pressure. So we must be careful in the telling of patients. Treat your individual as well as the disease.

Of course, I don't tell all my patients they have cancer. The next of responsibility in the family knows it. Some of the old ladies with cancer of the cervix, no I don't tell them. It would be unkind. If we can go ahead with the treatment under the guise that it is a little growth of something we are trying to remove, so much the better. Some of our older people become childish and don't bear up under this thing. So even in the serious case, in telling the patient he has cancer, we must treat the individual and not the disease.

## THE PITFALLS IN EYE, EAR, NOSE AND THROAT DIAGNOSIS: GLAUCOMA\*

HARRY GRADLE, M. D.

CHICAGO

The present day diagnosis of glaucoma presents some pitfalls that are not apparent except upon close study. First regarding the question of glaucoma simplex, the non-inflammatory type, which dominates the field by nearly twenty to one. The cases that come in late with diminished vision, contracted fields, dilated pupils, excavated discs, nobody would have trouble in diagnosing, but early conditions must be observed, and the men who do refraction will see these cases first. It would seem to me that glaucoma simplex is on the increase. From a relative standpoint, I am firmly convinced that there is an increase over what there was sixteen years ago. We see our cases earlier because the average person is paying more attention to his pains and aches, and comes to a physician sooner than in former years.

What must we look for and what must we avoid in making a diagnosis of glaucoma simplex? One of the very common conditions where a diagnosis is made and where it is unjustified are the uncomplicated cases of low grade chronic cyclitis, in which the only clinical manifestation is very fine precipitation on the posterior surface of the cornea. The balance of the intraocular pressure is disturbed and the pressure is raised, not to the point of an acute inflammatory condition, but rather just above the normal. Only too often it is that we find these cases with a diagnosis of simplex when they are cyclitis and not glaucoma. We find these in the younger persons, 25 to 30 years of age, where the cyclitis is apt to be of the tubercular type. In older people 45 to 50 years, with specific form of cyclitis, careful observation will reveal the diagnostic points. If you will examine these cases with the slitlamp you will see minute deposits of fibrin on the posterior surface. They should present no great difficulty in the diagnosis. One of the pitfalls to be avoided is the condition of the optic nerve head, when in the early stages. I believe the classification of excavation of the disc still holds true, and we cannot call the excavation pathological unless

\*Read as part of Symposium before Section on Eye, Ear, Nose and Throat, Illinois State Medical Society, Moline, May 31, 1927.

there is at least one vessel bending sharply at the disc. The excavation may be largely extended, nearly to the edge of the disc, but a physiological excavation and glaucomatous excavation can be differentiated by the bend of the vessels on the edge of the disc. If we stop to consider that anatomically, we will see how it can be. The optic nerve fibres must come over to form the excavation, bending down because a large number of fibres are forced into this narrow opening. Instead of forming a central excavation they may come over and bend at the edge of the disc, but there is a definite area between the edge of the excavation and the edge of the disc. The vessels as we know lie in the superficial layers of the retinal fibres. When pressure is exerted from within the eye this forces the fibres out and they bend at the edge of the disc; on account of the pressure, we will find that the vessels bend sharply and disappear. Whereas in the glaucomatous type the bend occurs from the edge of the disc. So we must observe the optic nerve head carefully to find out whether the bend of the vessels occurs within the confines of the disc or at the edge of the disc. When the vessels bend and disappear at the edge of the disc we are justified in saying we have a pathological condition that is in all probability glaucoma. One vessel is enough to cause suspicion in our minds. What would be our further investigation? Naturally, the intraocular tension measured tonometrically. You cannot make a diagnosis upon one measurement of the intraocular tension. If the tension is pathologically high—40 or 50—you do not need a tonometer. If it is pathologically low—13 or 10—you do not need a tonometer, you can tell it with your fingers. If it measures between 15 and 35, you have a record of the tension and that is all you have—you have nothing of diagnostic import. It does not mean glaucoma. What may be a perfectly normal tension for one eye is pathological in another eye. I have a patient who has been under the observation of my father and myself since 1907. Since 1912 the ocular tension in that patient's eyes has varied from 33 to 36 degrees of mercury. The visual field is full, vision is normal, and has remained so for fifteen years. That is not pathological. We have records on some patients of 20, 21, 22 mm. of Hg. tension, with beginning glaucoma simplex. For those individuals 21 is pathological. Conse-

quently it does not make any difference what the measurement is. It merely gives you a record for the future. You cannot make a diagnosis of glaucoma with the tonometer. All that it is good for is to make a record against which you can check in future. The same thing is true of blood pressure. There may not even be changes of any value to you in suspected cases, because, for example, you have a case of suspected incipient glaucoma and you find an intracular pressure of 28 or 29 degrees of mercury—is that pathological or normal? You do not know, because you do not know how that patient reacts. Of course it is of value for the future, but for immediate diagnosis—no. So you have to determine the visual fields. In the early stages they are of little value. The early degrees of simple glaucoma show little interference with peripheral fields or color. You may or may not find absolute or relative central scotomata. I think Smith said there are about eight types of scotoma described in glaucoma simplex that are not constant. So in a doubtful case you have not any objective findings upon which to base your diagnosis. Of late years Derby has written about dark adaptation and produced some very nice curves. There are so many conditions of disturbance of dark adaptation that we do not have an absolute diagnostic point. As a rule, however, in glaucoma simplex we may make a diagnosis upon first, the vision; second, the appearance of the optic nerve head; third, the peripheral form fields; fourth, central visual fields; fifth, possibility of increased tension; sixth, the curve of dark adaptation. You will note I omit the condition of the pupil. It is only after the glaucoma simplex is well established that we have a pupil that is of diagnostic value to us. In many cases you can only have limited opportunities to observe these cases, whereas it is necessary to follow these points over a period, not of days, but weeks, preferably without any mydriatic treatment. In Vienna a case would come in and be given homatropin for the purpose of provoking an attack of acute glaucoma if possible, on the theory that they were going to have it any way and why not get it over and be operated on. Provoke the glaucoma, operate on the case and let them go home. It would be impossible for us to handle any private cases that way. If you have difficulty in observing the fundi in cases that are



suspect glaucoma simplex, you need have no hesitancy about dilating that pupil with adrenalin. The early cases may be dilated without fear. The late cases of course must be watched carefully, and you should not use homatropin. We may use adrenalin or some of the substitutes for adrenalin. If you instill four drops with the patient lying flat with the eyelids held apart so that the adrenalin stays in for about 30-45 seconds, you will have ample dilatation. At first we injected it subcutaneously, then we instilled it on a cotton pledget, and we found that if we allowed it to stay in for that length of time there was ample dilatation for all diagnostic purposes. Of course, if the question of glaucoma is present it is wise to contract the pupil afterward with a mydriatic, but you may go ahead and dilate with adrenalin in a case where you have a suspicion of beginning glaucoma simplex. The slitlamp is of value to you. The distribution of pigment granules described by Koeppe as diagnostic of glaucoma does not occur in the early stages as a rule. Occasionally in the very beginning stages of non-inflammatory glaucoma we may find a distribution of pigment granules all over the surface of the iris in characteristic manner, but this is more apt to be the case in inflammatory than simplex, and it occurs so irregularly in simplex that we may not use this in diagnosis. To confirm a diagnosis in which there is a suspicion of simplex or non-inflammatory glaucoma, we must depend upon the optic nerve, upon visual fields for form and color, upon the presence of relative or absolute scotomata, upon intraocular tension, reduction of vision, dark adaptation. Sometimes in the very incipient stages it is possible to make a diagnosis and the patient will have to be watched over weeks or months. During this period it is inadvisable to use mydriatics because the picture will then be marred and an absolute diagnosis cannot be made.

#### DISCUSSION

Dr. L. A. Schultz, Rockford: What about the use of adrenalin in the case of arteriosclerosis?

Dr. Harry Gradle, Chicago: Adrenalin in arteriosclerosis, is naturally contraindicated for it may be absorbed from the conjunctiva as readily as from any other part of the body. Two or three minims in the sac will be enough to produce a dilated pupil but not to produce a systemic reaction.

#### THE MEDICAL MUSE

##### *Remarks of a husband about his wife's operation*

A—for Appendix all ready to break  
 B—is for Belly all ready to ache  
 C—is for Calories, they make you hop  
 D—is for Drainage—wetter than sop  
 E—is for Ether and Enema, too  
 F—is for Flowers they bring in to you  
 G—is for Gas Pains hurting like hell  
 H—is for Hypos to help you get well  
 I—for Incision with cat gut sewed up  
 J—is for Joke which is nothing else but  
 K—is for Knapp and also for Kelly  
 L—means you're Lucky to get back your belly  
 M—is for Mince pie just over the hall  
 N—is for Nurses the best of them all  
 O—Operation said Irvin S. Cobb  
 P—is for Pain that goes with the job  
 Q—is for Queer how your head gets to feel  
 R—is for Rhubarb to settle your meal  
 S—is for Stretcher to carry you up  
 T—is for Temperature after you sup  
 U—is for Urine that splashes and spurts  
 V—is for Vomit—oh gosh how it hurts  
 W—is for Winter with snow on the ground  
 X—marks the spot the appendix was found  
 Y—is for YOu getting well by the rule  
 Z—is for ZuZU who wrote all the drool.

#### A NUDE IS THE SAME AS A COW

The dame who took the part of Lady Godiva in the Chicago Arts ball says: "To me a nude is the same as a cow to other people." We must be "other people." To us a nude is just the same as a cow, too.

#### WATCH YOUR STEP

He—"You must economize? Think of the future. If I were to die, where would you be?"

She—"I should be here all right. The question is—where would you be?"—*Weekly Telegraph (Sheffield)*.

#### FATALITIES FROM LOCAL ANESTHETICS

EMIL MAYER, M. D.,

Chairman, Committee for the Study of Toxic Effects of Local Anesthetics of the American Medical Association

#### NEW YORK

Since the publications of the Committee for the Study of Toxic Effects of Local Anesthetics in 1924 I have been in receipt of many communications. All expressed their appreciation to the Board of Trustees and the Therapeutic Research Committee of the Council on Pharmacy and Chemistry for instituting and supporting the investigation.

Without making any special effort to secure reports of further fatalities, I have learned of fourteen additional deaths, none recorded in medical journals. With one exception these occurred in a limited but very

populous area of about 6,000,000 inhabitants during 1925, 1926 and 1927. The local anesthetics used were: cocaine, three; cocaine-procaine, two; procaine, eight; butyn, one. The cocaine-procaine fatalities were recorded as procaine, but the history obtained showed that cocaine had been used first. In at least two of the procaine fatalities the patients seem to have been practically moribund before operation was attempted. Of remarkable interest is that not a single one of these fatalities was ascribed to substitution, which was so frequent in our former report. It will be noted that one of the deaths from cocaine followed the use of cocaine paste, which our committee stated was dangerous. Case 8 was most carefully observed. No cocaine was used; the fluid injected was analyzed and the sad ending can be ascribed only to anaphylaxis. We still find the diagnosis of status lymphaticus made without any justification for it. In one case there was no necropsy and yet status lymphaticus was given as a cause. The trend of all communications is that cocaine is being used much less frequently than formerly, being limited to aiding examinations or for endolaryngeal work. The number of cocaine fatalities, five, is a very large number when the relative infrequency of its use is taken into consideration. Even those who still use it in intranasal operations confess that they would not have the temerity to use it in the pharynx. After eight years of study of this subject I still feel that procaine hydrochloride is undoubtedly the safest of all the local anesthetics now in general use. J. A. M. A. 4-21-28.

## Society Proceedings

### ADAMS COUNTY

May 7, 1928. On this day Dr. Joseph C. Bloodgood of Baltimore, Associate Professor of Clinical Surgery of Johns Hopkins University, Medical School, was our guest. A breakfast was tendered him by Quincy physicians with 11 in attendance.

Following the breakfast Dr. Bloodgood was taken to the Quincy High School where he gave two addresses before different groups of students, totaling about 700 in all. These talks were along general health lines.

At noon Dr. Bloodgood was the guest of the Quincy Kiwanis, Rotary, Lions and Exchange Clubs, and there were about 250 business men present. Dr. Bloodgood was introduced by the secretary and gave a talk on cancer which was broadcast by Radio Station WTAD.

At 3:00 P. M., Dr. Bloodgood gave a clinic at St. Mary's Hospital, which was attended by about 60 physicians and dentists. About eight patients were presented. At 6:00 P. M. a dinner was tendered Dr. Bloodgood at the Elks' Club at which 51 physicians were present. Following the dinner Doctor Bloodgood gave a talk on "What Every Doctor Should Know About the Diagnosis of the Early Stages of Cancer," which was illustrated by lantern slides. At 8:00 P. M. most of the physicians adjourned to the Empire Theater for a large public meeting. The theater was

crowded to capacity, several hundred people being unable to secure admission, the estimate attendance being placed at about 1,900. The High School Band rendered a half hour of splendid music following which Dr. Bloodgood was introduced by the president of the society, Dr. W. H. Baker. Dr. Bloodgood gave an excellent talk on "Cause, Prevention and Cure of Cancer," talking continuously for 70 minutes. He held his audience in a remarkable manner.

We believe Monday May 7, 1928, will stand for a long time as a banner day in the activities of the Adams County Medical Society. So far as we are aware, never before in the history of Quincy were so many lay people assembled together to hear a man talk on a medical topic. The success of the public meeting was mainly due to the splendid work of the chairman of the Cancer Committee, Dr. C. A. Wells. The meeting, however, could not have been put across if it had not received the splendid financial support which Dr. Wells was able to secure from a large number of Quincy physicians.

HAROLD SWANBERG, M. D.,  
Secretary.

### COOK COUNTY

#### CHICAGO MEDICAL SOCIETY

*Railroad Night, May 2, 1928*

1. Periodical Health Examinations—George B. Vilas, General Manager, Chicago North Western Railway Co.; Col. C. L. Whiting, Supt. of Terminals, Chicago, Milwaukee, St. Paul and Pacific Railway Co.; H. L. Ray, Manager, Personnel Department, Chicago, Rock Island and Pacific Railway Co.

2. A Summary of the Re-examinations of 10,000 Railroad Employees, With the Findings and Conclusions—C. W. Hopkins, Chief Surgeon, Chicago North Western Railway Co.

Discussion—William H. Bohart, Chief Surgeon, Chicago & Eastern Illinois Railway Co.; Arthur R. Metz, Chief Surgeon, Chicago, Milwaukee, St. Paul and Pacific Railway Co.; T. J. Kaster, Chief Surgeon, Grand Trunk Line; Frank E. Pierce, Chief Surgeon, New York Central Lines West; Hart E. Fisher, Chief Surgeon, Chicago, Aurora & Elgin Railroad Co.; D. B. Moss, Chief Medical and Surgical Officer of the Chicago, Burlington & Quincy Railway Co.; Theodore L. Hansen, Assistant Chief Surgeon, Chicago, Rock Island and Pacific Railway Co.

*Joint Meeting Aux Plaines Branch and the Central Society, May 16, 1928*

#### PROGRAM

Relation of Sinus Infection to Diseases of the Chest—W. V. Mullen, Crile Clinic, Cleveland, Ohio.

Discussion—Arthur M. Corwin, Robert H. Good.

*Regular Meeting, May 23, 1928*

1. The Reliability of the Schick Test and the Duration of Natural and Artificial Immunity in Diphtheria—C. A. Earle.

Discussion—Archibald Hoyne, F. O. Tonney, M. L. Blatt, Stephen V. Balderston.



2. Pre-malignant Disease of the Sigmoid and Rectum (Lantern Slides)—Clement L. Martin.

Discussion—Frank A. McJunkin.

### HENRY COUNTY

The annual meeting of the Henry County Medical Society was held in Kewanee, Thursday, May 3.

In the afternoon from 1:30 to 5:30 P. M., a Cancer and Heart Clinic was held at St. Francis Hospital, which was fairly well attended; however it is discouraging to your officers to note the absence of a number of our members who should have been present. Dr. Henry Schmitz presented six cancer cases for diagnosis and treatment, while Dr. Charles Spencer Williamson presented seven heart cases for diagnosis and treatment. While this was our first clinic assembly, we feel that a profitable afternoon was spent with these cases, and if it is the wish of the members your secretary will try to hold them annually.

In the evening at the Parkside Hotel a 6 o'clock dinner was tendered our guests, thirty-five being present. Following the dinner, Dr. William D. Chapman, Silvis, Ill., Councilor Fourth District, gave a talk on Medical Organization.

At 8 P. M. at the Kewanee Public Library assembly room our Scientific Program was presented:

"The Commoner Types of Organic Heart Disease and Their Management," by Charles Spencer Williamson, Chicago.

Dr. Williamson's paper was well received.

"The Diagnosis, Prognosis and Indication for Treatment of Carcinoma of the Uterine Cervix," by Dr. Henry Schmitz, Chicago.

Dr. Schmitz' paper was both instructive and interesting.

At the business meeting, following the above program, the following officers were elected: President, Robert H. Stewart, Galva; vice-president, G. H. Hoffman, Kewanee; secretary and treasurer, P. J. McDermott, Kewanee. Board of Censors: Chairman, Charles A. Young, Geneseo; H. W. Waterous, Galva; John T. Boswell, Kewanee.

Delegates to the Illinois State Medical Meeting for the years 1928 and 1929: P. J. McDermott, Kewanee, delegate; J. A. Gustafson, Orion, alternate.

Four new members were elected at this meeting, and the resignation of Dr. Hugh Hover, Galva, from the society was accepted. Dr. Hover was requested to resign due to his unethical advertising in the local papers.

Members of the profession were present from Kewanee, Galva, Cambridge, Orion, Geneseo, Galesburg, Atkinson, Wyoming and Toulon.

P. J. McDERMOTT,  
Secretary.

### Marriages

CYRUS H. ANDERSON, East Moline, Ill., to Mrs. Florence E. Ervin of Biggsville, at Cedar Rapids, Iowa, April 24.

WILLIAM G. BEEK to Mrs. Mae Fox, both of Chicago, May 8.

JOSEPH E. JENSEN, Momence, Ill., to Miss Aimie L. Bigelow, February 22.

WALTER H. MILBACHER, Aurora, Ill., to Miss Mary Jane Benson of Joliet, in Chicago, January 11.

FRANCIS PERRY HAMMOND, to Miss Marguerite Helen Conrad, both of Chicago, May 16.

ALEXANDER P. HORWITZ, to Mrs. Harriet M. Parkhurst, both of Roswell, N. Mex., April 21.

### Personals

This issue of the JOURNAL carries the portrait of Doctor John E. Tuite, President of the Illinois State Medical Society, as a supplement.

Dr. Robert F. Lischer, Mascoutah, recently gave a lecture at the Mayo Clinic, Rochester, Minn., on "The Country Doctor."

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind., addressed the Physicians' Fellowship Club, May 25, on "Medical Economics or the Physician as the Goat."

Dr. Edwin L. Winslow, who has resided in Danville for about twenty-five years, recently became assistant surgeon at the National Military Home, Dayton, Ohio.

Dr. Harry E. Marselus, formerly on the staff of the Peoria State Hospital, is now assistant managing officer of the East Moline State Hospital.

Dr. William A. Evans, professor of public health, Northwestern University Medical School, was guest of honor at the opening exercises of cancer week in Boston, April 23; his subject was "Cancer Control."

E. S. London, professor of physiology, University of Leningrad, gave two illustrated lectures under the joint auspices of the Institute of Medicine of Chicago and the University of Illinois College of Medicine, May 3-4, on "Experimental Fistulas of Blood Vessels" and "Enzymes. Hormones and Vitamins."

Doctor and Mrs. A. M. Earel of Hoopston have recently returned from a pleasant three-months' trip through South, Central and Eastern Africa.

Dr. A. M. Petersen Saunders read a paper before the Chicago Pathological Society at the May meeting entitled: Fluctuations of the hydrogen-ion concentration of saliva in epilepsy.

### News Notes

—The medical staff of the University of Illinois School of Medicine gave a dinner at the Medical and Dental Arts Club, May 25, for the senior class.

—The dermatologic department of Northwestern University gave a dinner to Dr. and Mrs. Arthur W. Stillians, May 14, at the Medical and Dental Arts Club prior to their departure for Berlin and Vienna.

—The new \$600,000 Woodlawn Hospital, Sixty-First Street and Drexel Avenue, was opened, May 23. It has a capacity of 140 beds and is said to be owned by 500 persons, of whom fifty are physicians.

—A symposium on the toxic thyroid was presented before the Chicago Society of Internal Medicine, City Club, May 28, by Drs. Joseph L. Miller, Anton J. Carlson, Charles A. Elliott, Harry M. Richter and Edward L. Jenkinson.

—A campaign is being conducted for funds to construct the new Pentecost Hospital for negroes, which will be on the south side. It is to be a Catholic sisters' hospital; Cardinal Mundelein, who gave \$5,000, made the first contribution.

—The speakers at the May 24 meeting of the Chicago Urological Society, 50 East Erie Street, Drs. Charles B. Huggins, W. J. Carlson, Jacob Meyer, Daniel N. Eisendrath and Edwin W. Hirsch, and W. J. Carlson, Milwaukee.

—The secretary of state has been requested to issue a letter of credentials to Dr. Gilbert Fitzpatrick, Chicago, lieutenant colonel, medical reserve corps, designating him as unofficial representative of the medical department, U. S. Army, at the International Congress of Tropical Medicine and Hygiene to be held in Cairo, Egypt, December 15.

—The local officers of the medical reserve corps of the army gave a dinner at the Medical and Dental Arts Club, May 16, in honor of Col. Clarence J. Manly, corps area surgeon, and Major Henry C. Bierbower, who have generously assisted in conducting the reserve officers' training school during the year.

—A joint meeting was held at the City Club, May 25, under the auspices of the Institute of Medicine and the Society of Experimental Biology and Medicine of Chicago devoted to the presentation of work by Chicago investigators. The program included nine presentations from the University of Chicago, University of Illinois and Northwestern University.

—The annual meeting of the Chicago Neurological Society was held at the Billings Memorial Hospital, May 17. Among others, Drs. Anton J. Carlson, Arno B. Luckhardt, Dallas B. Phe-mister, John Favill and Roy R. Grinker spoke. The president of the society invited the members to be his guests at dinner at the Shoreland Hotel.

—At the regular meeting of the Chicago Gynecological Society, May 18, Murphy Memorial Building, Drs. Russell A. Scott, Evanston, spoke on "Hemiplegia During Pregnancy"; Ralph A. Reis, "Induction of Labor," and Abraham F. Lash, "Puerperal Fever IV: The Therapeutic Value of a New Concentrated Streptococcus Antitoxin."

—Since February 20, the state department of health has distributed toxin-antitoxin prepared with goat serum instead of horse serum and this policy will be continued in the future. The department of health made the change to remove any possibility of sensitizing an individual who might previously have been administered horse serum. Every possible danger of sensitization, the department says, now has been removed.

—At its regular meeting, May 1, the council of the Chicago Medical Society adopted a resolution disapproving use of the words "clinic or institute" in the name of partnerships formed by physicians for the purpose of practicing medicine for profit either in a limited field or in all its branches. This action was taken following inquiries as to the propriety of physicians forming a partnership to practice for profit and designating it a "clinic or institute."

—The staff of St. Anthony's Hospital, Rock Island, held its first annual clinic, April 25, to which physicians from surrounding counties were invited. Among others, Dr. Arthur R. Elliott, Chicago, discussed coronary sclerosis; Dr. George L. Eyster, Rock Island, one of the original members of the hospital staff since its founding in 1893, summarized the history of the institution; Dr. George W. Hall, Chicago, spoke on "Tumors



of the Brain"; Dr. Karl A. Meyer, Chicago, acute abdominal conditions, and Dr. Nathaniel G. Alcock, Iowa City, interesting urologic cases.

—About fifty physicians and nurses, assigned to health inspection work in the schools, were dismissed, May 1, it is reported, by the Chicago health department because of shortage of funds. These employees had been paid prior to that time from the funds of the Municipal Tuberculosis Sanitarium when they were shifted to the health department. A local philanthropist offered to pay the salaries of these employees until the end of the school year, but the chairman of the finance committee of the city council said that the committee would raise the necessary funds for these employees by a transfer from a less important appropriation.

—Henderson County Medical Society passed the following Resolutions of Respect:

WHEREAS, The Great Physician of the Universe has called Doctor William Jesse Emerson from his labors here; and

WHEREAS, the intimate relations of the members of the Henderson County Medical Society and their faith in his executive abilities induced them to elect him to the highest office in the society, which he held for several terms therefore be it

*Resolved*, that his services as a member of our County and Illinois State Medical Societies, a good citizen and a kind physician to many sick and afflicted, will be held in grateful remembrance.

*Resolved*, that the Henderson County Medical Society extend to the bereaved wife, son, daughter and aged father our sincere sympathies; and commend them to the great source of consolation and love, Whose power alone is able to protect and sustain them.

*Resolved*, that these resolutions be entered on our records, a copy be presented to the family and copies be furnished to The Stronghurst Graphic. The Henderson County Journal and The Lomax Searchlight for publication.

## Deaths

ALBERT WALKER BIBB, Chicago; Meharry Medical College, Nashville, Tenn., 1916; aged 42; died, February 20, of chronic nephritis, heart disease and arthritis.

WILLIAM SHERMAN BRACKEN, Chicago; Northwestern University Medical School, Chicago, 1902;

formerly clinical assistant in laryngology and rhinology at his alma mater and clinical professor of ophthalmology, Loyola University School of Medicine; aged 61; died, April 18, at the Chicago Fresh Air Hospital, of bronchopneumonia.

WILLIAM HENRY DALEY, Chicago; Harvey Medical College, Chicago, 1903; University of Illinois College of Medicine, Chicago, 1909; aged 53; died, April 23, at the Mercyville Sanitarium, Aurora, Ill., of chronic arachnoiditis with cyst formation.

WILLIAM JESSE EMERSON, Lomax, Ill.; Rush Medical College, Chicago, 1888; a Fellow, A. M. A.; president of the Henderson County Medical Society; county coroner; aged 59; died, May 2, at the Burlington (Iowa) Hospital of coronary sclerosis.

FREDERICK HENRY DANIELS, Batavia, Ill.; Medical School of Maine, Portland, 1882; superintendent of the Bellevue Place Sanitarium; aged 73; died, March 19, of cerebral embolism.

CHARLES HENRY FREDERICKSON, Chicago; Hahnemann Medical College and Hospital, Chicago, 1918; aged 39; died, April 17, of bronchopneumonia.

CYRIL JOSEPH HODAPP, O'Fallon, Ill.; St. Louis University School of Medicine, 1925; a Fellow, A. M. A.; aged 29; died suddenly, April 30, of heart disease.

GEORGE L. JOLLY, Chicago; College of Physicians and Surgeons, Baltimore, 1883; aged 72; died, April 13, of organic heart disease.

SIDNEY CONDON MARTIN, Anna, Ill.; Chicago Medical College, 1884; a Fellow, A. M. A.; formerly member of the city board of health and board of education; formerly on the staff of the Hale-Willard Hospital; aged 77; died, April 10, of heart disease.

EDWARD LOUIS MOORHEAD, Chicago; Rush Medical College, Chicago, 1890; a Fellow, A. M. A.; professor and head of the department of surgery, Loyola University School of Medicine since 1920; assistant clinical professor of surgery, Rush Medical College, 1894-1904; clinical professor of surgery, Northwestern University School of Medicine, 1917-1920; attending surgeon, Cook County Hospital, 1893-1904; president of the medical board, Cook County Hospital, 1898-1901; surgeon to St. Anthony de Padua Hospital, 1897-1917; chief surgeon to the Mercy Hospital since 1917; consulting surgeon to the Misericordia St. Bernard's and the Oak Park (Ill.) hospitals; aged 64; died, April 26.

JOSEPH REILLY, Chicago, St. Louis Medical College, 1872; member of the Illinois State Medical Society; Civil War veteran; aged 79; died, May 2, at the German Deaconess Hospital, of myocarditis and diabetes mellitus.

WILLIAM STORCK, Chicago; University of Illinois College of Medicine, Chicago, 1901; a Fellow, A. M. A.; aged 61; died April 22, of bronchopneumonia.

EMIL ERNEST TORELL, Chicago; Northwestern University School of Medicine, Chicago, 1907; aged 46; on the staffs of the Lakeview Hospital and the Ravenswood Hospital, where he died, April 23, of complications following an operation for appendicitis.

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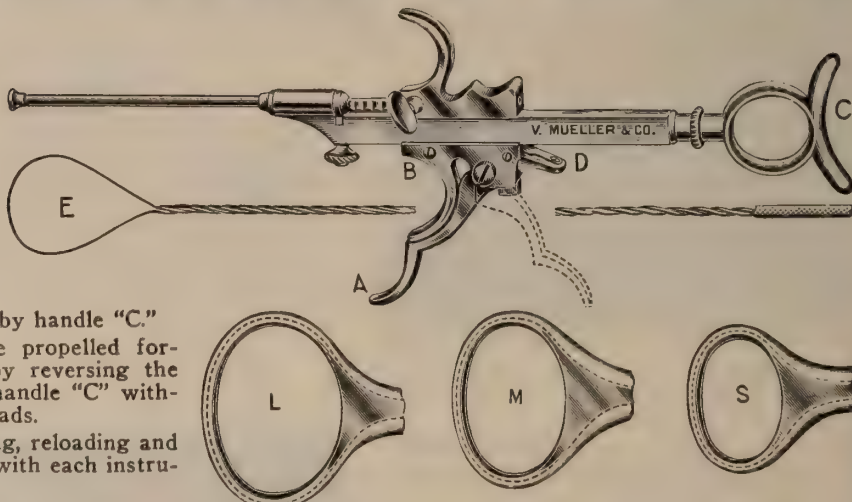
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*Raising to normal the low  
blood pressure usually attendant  
upon such conditions.*

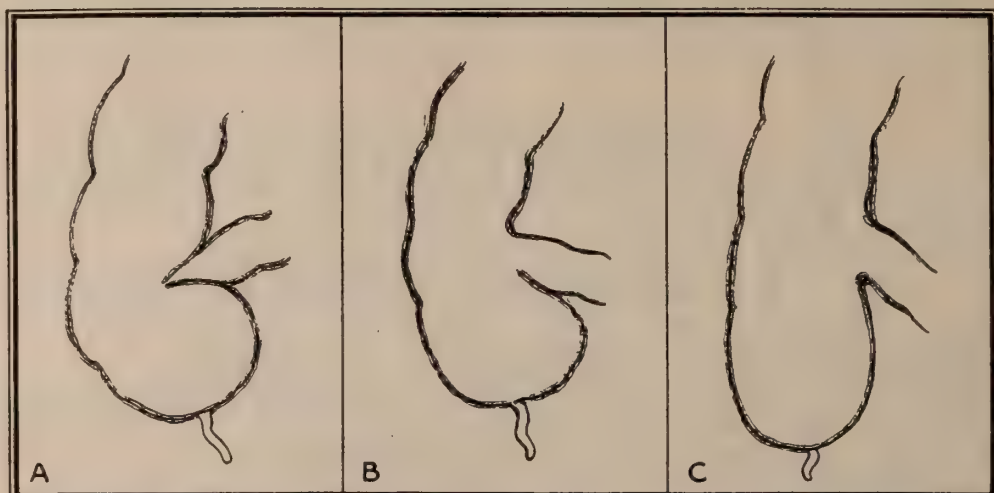
*Dose: One or two tablets three  
times daily before meals.*

## G. W. CARNRICK CO.

411 Canal Street

New York N. Y.





A Normal Ileocecal Valve.

B Partially Incompetent Ileocecal Valve.

C Wholly Incompetent Ileocecal Valve.

Reproduced from "Colon Hygiene," by J. H. Kellogg, M.D.

## Toxemia Due to Ileocecal Incompetency

X-ray examination in hundreds of cases has shown the cause of an excess of toxins such as indican in the urine. It results from a reflux of putrefactive material from the colon into the small intestine, due to incompetency of the ileocecal valve. More than 20 times as much fluid is absorbed from the small intestine as from the colon—hence such toxins are readily absorbed.

Nujol itself is non-absorbable. It has the unique property of dissolving toxins and by holding them in solution, preventing their absorption by the system. Many intestinal toxins are more soluble in Nujol than in water. Thus Nujol proves especially beneficial in cases of ileocecal incompetency. Toxins dissolved in Nujol cannot be absorbed by the system.

The brownish color of Nujol as seen in the stool is partly due to toxins which it holds in solution.

Nujol is a safe and effective treatment in all types of constipation and intestinal toxemia.

# Nujol

REG. U.S. PAT. OFF.

# Not sleep at any price!

**N**O, not at the cost of sacrificing the very thing for which sleep is intended—that priceless feeling of well-being on the morrow—nor at the cost of organic impairment from the hypnotic agent employed.

You desire to gain sleep for your patient of a character that is refreshing—a sleep that will allow the natural reconstruction process of the human economy to regain the vitality expended during the day. Sleep of the proper quality can be gained with—

## ELIXIR ALURATE 'ROCHE'

The hypnotic principle in this splendid remedy (allyl-isopropyl-barbiturate) is five times greater in hypnotic efficiency than barbital and also superior in action. Try it in place of barbital or other hypnotics and ask your patient for the verdict.

With small doses of Elixir Alurate you can gain just the proper amount of hypnotic assistance to help insomnia sufferers across the borderline into a sleep that is satisfying in every sense. What a difference between such a sleep and narcosis! May we send you a free supply for trial?

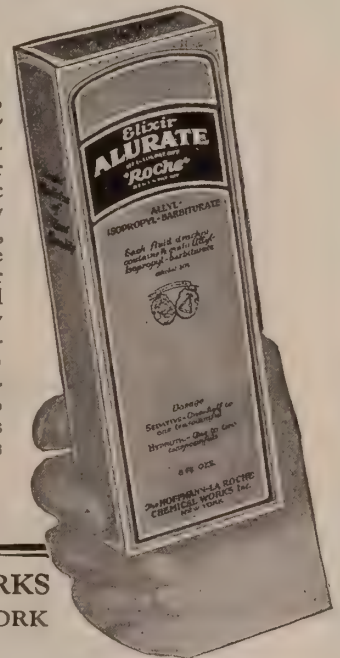
**SAFE**  
**QUICK**  
**NON-NARCOTIC**  
**NOT DEPRESSING TO**  
**HEART OR RESPIRATION**  
**DEVOID OF**  
**COAL-TAR DERIVATIVES**

*An incomparable  
sedative = hypnotic*

### ELIXIR ALURATE

gives splendid results in sleeplessness and nervousness or wherever a sedative or hypnotic may be required. It is especially useful in difficult mental cases, for children or where a change of dosage form from tablets or powders is advisable. Each fluid drachm of this palatable new Elixir contains  $\frac{1}{2}$  gr. of the hypnotic constituent (not analgesic) of our widely accepted non-narcotic Allonal. In relation to its great hypnotic efficiency, its margin of therapeutic safety is extremely wide.

Marketed in 6-ounce bottles



**THE HOFFMANN-LA ROCHE CHEMICAL WORKS**  
17-21 CLIFF STREET NEW YORK



# Alike

## as peas in a pod

—yes, so far as looks go, one tablet is just about the same as another. But there the similarity ends.

For example, take a package of Thyro-Ovarian Co. (Harrower), open it, break the sanitape, and take out a tablet. Feel how friable it is—it crumbles easily. Then, if you wish, take some of the tablets to a laboratory. Tests will reveal the fact that the follicular estrus-producing principle can be extracted from them and purified to such a high degree that, when injected into spayed rats, it will produce estrus.

This and other tests demonstrate that the ovarian ingredient of this formula contains all the active principles of the fresh ovary. Incidentally, it explains one reason for the success and popularity that Thyro-Ovarian Co. (Harrower) enjoys with the profession, in the treatment of dysovarism—amenorrhea, dysmenorrhea, and kindred disorders.

Harrower products look just like any other tablets on the outside, but—the care and scrupulous accuracy that go into their making prove once again that *appearance is more, much more, than surface deep.*



**The Harrower Laboratory, Inc.**  
Glendale, California

# *The New* **Horlick's Milk Modifier**

*A superior  
Maltose and Dextrin prod-  
uct for infant feeding*

## **What Horlick Quality means:**

1. The maltose and dextrin is de-  
rived entirely from processed barley  
malt and wheat, and the product is  
therefore superior to those made  
from starch.

2. The malt is of the highest  
grade, made in our own malt houses,  
in order to obtain the maximum  
convertive effect of the diastasic  
enzyme.

3. The grains supply readily  
soluble protein and mineral salts,  
of value in artificial feeding. The  
cereal protein is a colloid which aids  
in inhibiting the formation of tough  
curds in the infant's stomach.

4. The proportions of maltose  
63% and dextrin 19.5% make the  
product of special usefulness in  
regulating the infant's bowels.

*For use as a milk modifier on  
prescription by physicians.*  
*Directions and circulars are sup-  
plied to physicians only.*

Samples prepaid on request to  
**Horlick—Racine, Wis., U. S. A.**

# **A fact of scientific importance**

Armour and Company is now entering  
the sixty-first year of its history.

The significance of this to the medical  
profession may not at first be apparent,  
yet it is of great importance. Packing  
houses are indices of a vital change in  
social economy. Until their establish-  
ment all meat supplies came from local  
abattoirs, unsanitary, uneconomical, and  
incapable of meeting the rapidly increas-  
ing demands of a highly complicated  
civilization resting on an industrial  
foundation. In the natural course of  
progress it became necessary to concen-  
trate the business of killing and dressing  
cattle for food, and to establish focal  
points from which to distribute fresh  
meat rapidly to all parts of the country.  
Armour and Company is the largest and  
most efficient organization doing this  
work.

Paralleling this economic evolution  
came startling discoveries in medical  
science. Of these, perhaps, the most im-  
portant was the progress of glandular  
therapy. Great concentration points for  
fresh animal material alone could make  
possible an adequate supply of organo-  
therapeutic products. And so, for thirty  
years, Armour Laboratory has kept pace  
with medical requirements. It has thor-  
oughly earned its reputation as "*Head-  
quarters for medical supplies of animal  
origin.*"

**ARMOUR AND COMPANY**

**Chicago**





## Neurasthenia

In the symptom-complex of neurasthenia, usually the result of prolonged mental strain or overwork, there is marked depression of the vital forces and nervous debility. In such conditions

## ESKAY'S NEURO PHOSPHATES

### SMITH, KLINE & FRENCH CO.

105-115 No. 5th Street,  
Philadelphia, Pa.

Established 1841

Manufacturers of  
*Eskay's Food*  
*Eskay's Suxiphen*

is of paramount value as a nerve-tissue reconstructive. Not only does it stimulate nerve-cell functions and improve nerve-cell nutrition, but it acts also as a stomachic bitter, increasing the appetite and improving the digestion.

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## RADIUM RENTAL SERVICE

BY

### THE PHYSICIANS RADIUM ASSOCIATION of CHICAGO, Inc.

Incorporated under the laws of Illinois, not for profit, but for the purpose of making radium available to Physicians to be used in the treatment of their patients. Radium loaned to Physicians at moderate rental fees, or patients may be referred to us for treatment if preferred.

Careful consideration will be given inquiries concerning cases in which the use of Radium is indicated

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# Hours of Sun Treatment ... in as many minutes!

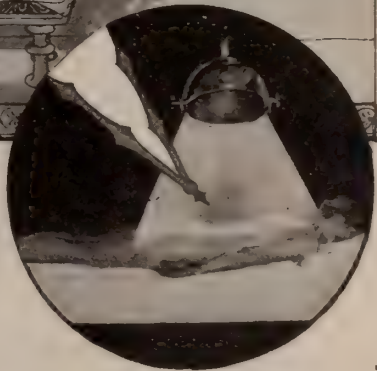


"GET OUT INTO THE SUNSHINE" is a bit of medical advice, which for many ailments, no professional man will question. Yet, none knows better than the active practitioner the futility of this advice in numerous appealing cases. And no one knows better than the practicing helio-therapist the difficulties in the way of making the therapeutic application of sunlight general.

Science has met this evident need by virtually isolating the vital, health-giving rays of the spectrum and enabling them to be produced in *therapeutic intensity* at the turn of a switch. The quartz mercury vapor arc is recognized throughout the world as a rich and widely used clinical source of ultraviolet. And, HANOVIA has, through constant research, endeavored to produce the most precise apparatus for the therapeutic appli-

cation of this modality.

Through either the ALPINE SUN LAMP, for general body radiation, or the KROMAYER LAMP for localized treatment, there is made available a flood of ultraviolet... cool... and of sufficient intensity to produce therapeutic benefits in from ten to forty-five seconds. Truly a means for obtaining the biological stimulus of hours of sun treatment in as many minutes.



## HANOVIA CHEMICAL & MFG. CO.

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Gentlemen:—Please furnish me, without obligation, reprints of your authoritative papers upon the use of quartz light in the treatment of \_\_\_\_\_

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# THE STANDARD LOESER'S INTRAVENOUS SOLUTIONS CERTIFIED



## IRON ARSENIC PHOSPHORUS INTRAVENOUSLY

We have prepared a standardized solution of this favorite combination of hematronics for intravenous administration. Indicated in secondary anemias, neurasthenia, etc.

LOESER'S INTRAVENOUS SOLUTION  
IRON, ARSENIC and PHOSPHORUS

A standardized sterile stable solution in hermetically sealed Jena glass ampoules. 5 cc. contain 64 mg. (1 grain) Iron Cacodylate, and 64 mg. (1 grain) Sodium Glycerophosphate, U. S. P.

**LOESER LABORATORY**  
NEW YORK INTRAVENOUS LABORATORY  
New Location: 22 WEST 26TH STREET, NEW YORK, N. Y.

## Mellin's Food—A Milk Modifier

### Bottle-Feeding

Bottle-feeding as applied to the average baby is not a difficult matter, for with cow's milk and water together with a modifier made expressly for the purpose, a food can be easily prepared which contains the essential elements of nutrition in properly balanced proportions and in a form suitable to the infant's digestion.

The physician adds water to cow's milk to reduce the amount of casein and adds the modifier for several purposes:

- First,* with the hope that the modifier will favorably influence the digestibility of the milk casein.
- Second,* to build up the carbohydrate content of the milk.
- Third,* to readjust the mineral constituents.
- Fourth,* to make a mixture so palatable that it will be readily taken without urging.

Mellin's Food is an outstanding example of what a milk modifier should be, for it is made for the purpose, acts upon the milk casein in such a manner that protein digestion proceeds without interruption, furnishes the extra carbohydrates needed and in a form (*maltose and dextrins*) particularly well suited to the infant's digestion, adds mineral salts for the readjustment of inorganic constituents and makes a mixture so appealing to the taste that babies take it eagerly.

**Mellin's Food Company, 177 State Street, Boston, Mass.**

# "Pure Dry Yeast Leads the List"

*"Scientists have been slow about adding P-P {pellagra-preventive} to the list of vitamins," says a nationally known health counsellor, "but all are agreed that proper food is both the preventive and cure. Of the foods, pure dry yeast leads the list."*

Similar conclusions have been reached and published by the authorities in charge of pellagra investigations for the United States Public Health Service.

For the use of physicians we can supply clean dried dead yeast cells in bulk or in 0.5 gram tablets. This yeast (widely known in tablet form under its trade name Yeast Foam Tablets) is recognized as the standard for use in vitamin studies by investigators of the leading universities of the nation and of the U. S. Government. Its potency is controlled by accepted biological standards; its vitamin B and protein content are guaranteed; it will not ferment nor cause gas. Price of this yeast, powdered or in tablets, as well as further information may be had on request.

. . .

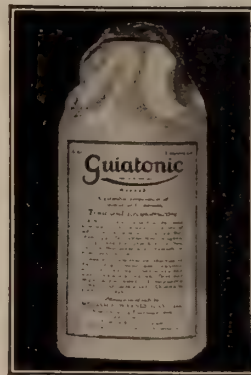
Northwestern Yeast Co., 1750 No. Ashland Avenue, Chicago, Ill. World's largest makers of dried yeast. Manufacturers of Yeast Foam and Magic Yeast (for baking), Yeast Foam Tablets, Yeast Foam Malted Milk, Animal-Poultry Yeast Foam.



## From Within

The remarkable efficacy of Guiatonic in all conditions of bronchial congestion may conceivably be attributed to its action from *within*. Assimilated by the digestive system, its active principles reach the area of congestion through the blood stream.

In Bronchitis, Bronchiectasis, Pneumonia, and all conditions of pulmonary congestion, Guiatonic is the logical adjuvant.



A palatable preparation of special salts of guaiacol and creosote which may be freely given to the weakest patient, without fear of gastric disturbance. It contains no narcotics.

Indicated in all depressed or debilitated conditions, or whenever a tonic is required.

## Guiatonic

*A generous trial quantity free upon request. William R. Warner & Company, Inc., Manufacturing Pharmacutists since 1856. 113-123 West 18th Street, New York City*



# HAGEE'S CORDIAL

OF THE

## EXTRACT OF COD LIVER OIL COMPOUND

(Cord. Ext. Ol. Morrhuæ Comp.) (Hagee)

recognized by leading physicians as the superlative prescription when the need for cod liver oil is indicated.

**"THE PROMISE OF THE FIRST DOSE IS JUSTIFIED BY THE PERFORMANCE OF THE LAST"**

Hagee's Cordial is exceptionally high in the vitamin extractive of cod liver oil. Its medicinal qualities are augmented by the introduction of Glycerophosphates of Calcium and Sodium. It is easily digested and perfectly assimilated. It positively has no bad odor or nauseating taste, even to the most sensitive patient.

**Katharmon Chemical Company, St. Louis, Mo.**



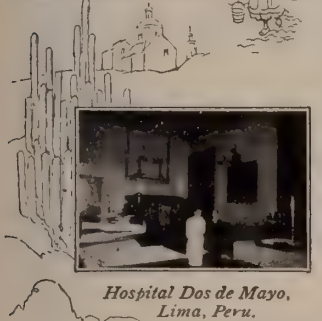
# Why Do Many Leading Physicians and Hospitals in Foreign Countries Buy Victor X-Ray Equipment?



*St. Luke's International Hospital, Tokyo, Japan.*



*Southern Islands Hospital, Cebu, Philippine Islands.*



*Hospital Dos de Mayo, Lima, Peru.*



*Dr. A. Mayoral, Ponce, Porto Rico.*

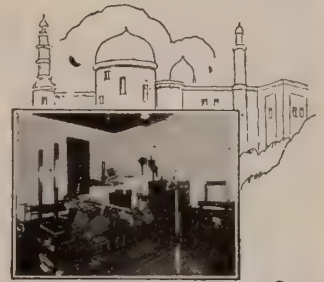
IN every civilized portion of this great, wide world, you are sure to find a group of men outstanding in their respective professions, because they are inspired in their aim to render fellow men a service eminently better than the generally accepted standard.

Where could such a high motive register greater benefits to humanity than through the physician in his community, clinic or hospital? The physician so inspired will invariably prove to be one who insists on having the best that science and research offer in drugs, instruments and equipment that comprise his armamentarium.

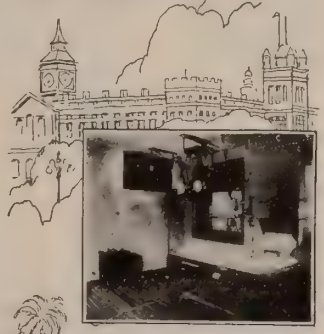
Why is Victor equipment found in use in all parts of the world, notwithstanding the fact that foreign manufactured equipment can be bought at prices considerably lower? The answer seems obvious enough. There is always a sufficient number of physicians and institutions who appreciate the advantages in having the best equipment available for their individual work, to justify the investment in a research and manufacturing organization that make possible this super-quality.

It is of more than passing interest to add that this class of business has made Victor X-Ray Corporation the largest organization in the world specializing in the manufacture of X-Ray and Physical Therapeutic apparatus.

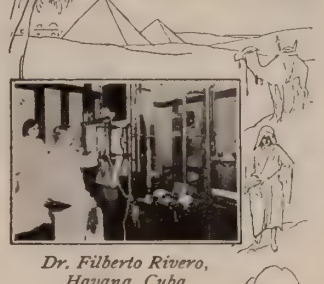
World-wide Victor Service is available through 48 service organizations established in 34 different countries, in addition to the 40 located in the principal cities of the United States and Canada



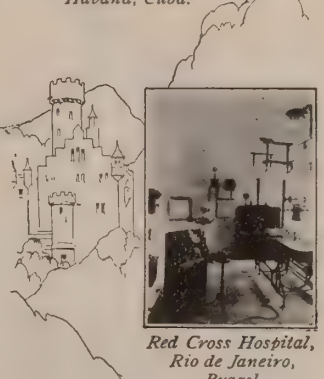
*Lewisham Hospital, Sydney, Australia.*



*Kuling Sanitarium, Kuling, Kiangsi, China.*



*Dr. Filberto Rivero, Havana, Cuba.*



*Red Cross Hospital, Rio de Janeiro, Brazil.*

2012 Jackson Boulevard

VICTOR X-RAY CORPORATION

Chicago, Illinois

## X-RAY

Diagnostic and Deep Therapy Apparatus. Also manufacturers of the Coolidge Tube



## PHYSICAL THERAPY

High Frequency, Ultra-Violet, Sinusoidal, Galvanic and Phototherapy Apparatus



# Relief of Cough *without Opiates*

THIS objective is completely attained by the combined action of cresolsulphonates Luminal in the form of an agreeable fluid preparation--

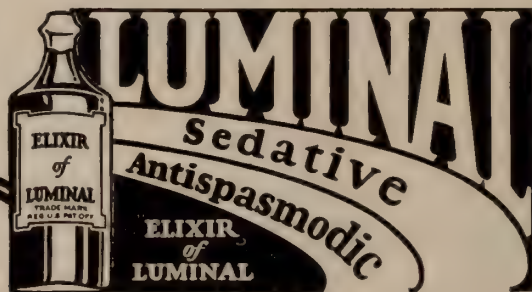
## KRES-LUMIN

*Trade-Mark Reg. U. S. Pat. Off.*

Irritation in the broncho-pulmonary tract is alleviated by the small dose of LUMINAL without the undesirable effects of the opiates. The cresolsulphonates liquefy tenacious secretions and facilitate expectoration.

*Dose:* For adults, 2 or 3 teaspoonfuls in water three or four times daily. For children,  $\frac{1}{2}$  to 1 teaspoonful.

[Sample and Literature on Request]



# WINTHROP

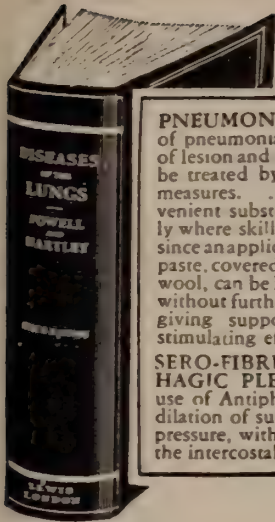
## CHEMICAL COMPANY, INC.

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117 Hudson Street  
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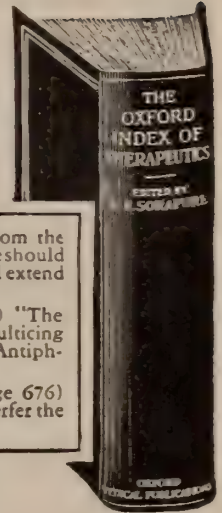
Canada: Windsor, Ont.

# Evidence of Merit



**PNEUMONIA:** (Page 312) "The pain of pneumonia, which indicates the seat of lesion and aggravates dyspnoea should be treated by local rather than general measures. . . . Antiphlogistine is a convenient substitute for poultices, especially where skilled nursing is not available, since an application of the Antiphlogistine paste, covered with a layer of warm cotton-wool, can be left applied for twelve hours without further disturbance of the patient, giving support and having a decided stimulating effect."

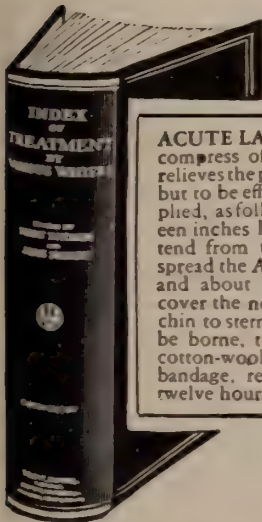
**SERO-FIBRINOUS and HAEMORRHAGIC PLEURISY:** (Page 107) "The use of Antiphlogistine, serving, by the dilation of superficial capillaries, to ease pressure, within the deeper branches of the intercostal vessels"



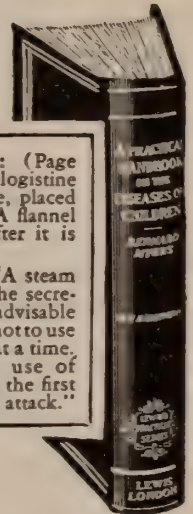
**PNEUMONIA:** (Page 718) "From the onset of the attack Antiphlogistine should be applied. The poultices should extend from the spine to the sternum."

**DRY PLEURITIS:** (Page 715) "The most effective local measure is poulticing . . . . we may use a thick layer of Antiphlogistine"

**ACUTE BRONCHITIS:** (Page 676) "Poultices: Many practitioners prefer the use of Antiphlogistine."

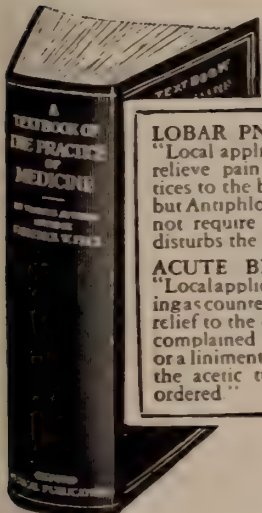


**ACUTE LARYNGITIS:** (Page 531) "A compress of Antiphlogistine sometimes relieves the pain better than anything else, but to be effective it must be properly applied, as follows: take a piece of lint eighteen inches long and broad enough to extend from the chin to the collar-bone; spread the Antiphlogistine on it very hot, and about an inch thick, sufficient to cover the neck from ear to ear and from chin to sternum, apply it as hot as it can be borne, then put on a thick layer of cotton-wool, and keep it tight with a bandage, renew again at the end of twelve hours."



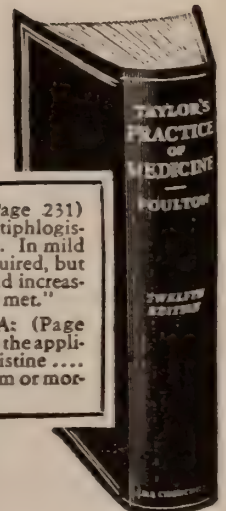
**BRONCHO-PNEUMONIA:** (Page 332) "In the early stages Antiphlogistine is sometimes distinctly valuable, placed only on the front or the back. A flannel jacket had better be worn after it is removed."

**BRONCHITIS:** (Page 324) "A steam kettle is only suggested when the secretion is scanty, but distinctly inadvisable if copious and loose; it is better not to use it for more than half an hour at a time. Antiphlogistine, the judicious use of poultices in certain cases during the first few days will often cut short an attack."



**LOBAR PNEUMONIA:** (Page 1047) "Local applications to the chest help to relieve pain. Usually hot linseed poultices to the back and sides are employed, but Antiphlogistine applied on wool does not require such frequent changing and disturbs the patient less"

**ACUTE BRONCHITIS:** (Page 955) "Local applications over the sternum, acting as counter-irritants, seem to give some relief to the distressing soreness so often complained of. Antiphlogistine, or a liniment, such as camphorated oil or the acetic turpentine liniment, may be ordered"



**LOBAR PNEUMONIA:** (Page 231) "Local applications such as Antiphlogistine . . . . may also relieve pain. In mild cases this may be all that is required, but in the severer cases delirium and increasing prostration will have to be met."

**PLEURISY and EMPYEMA:** (Page 264) "Pain may be alleviated by the application of poultices, Antiphlogistine . . . and the administration of opium or morphia subcutaneously."

[Similar to Cataplasm of Kaolin (N.F.)]

## FORMULA

Chemically pure Glycerine.....	45.000 %	Essence of Menthol.....	0.002 %
Iodine .....	0.01 %	Essence of Gaultheria.....	0.002 %
Boric Acid .....	0.1 %	Essence of Eucalyptus.....	0.002 %
Salicylic Acid .....	0.02 %	Mineral Clay .....	54.964 %



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(Continued on page 46)

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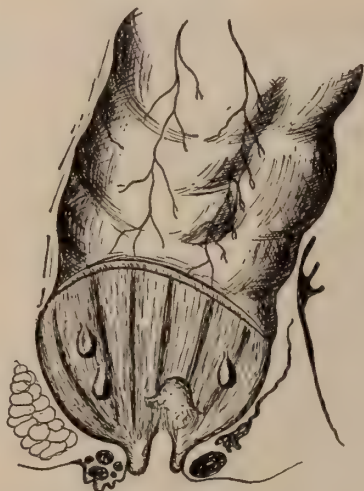
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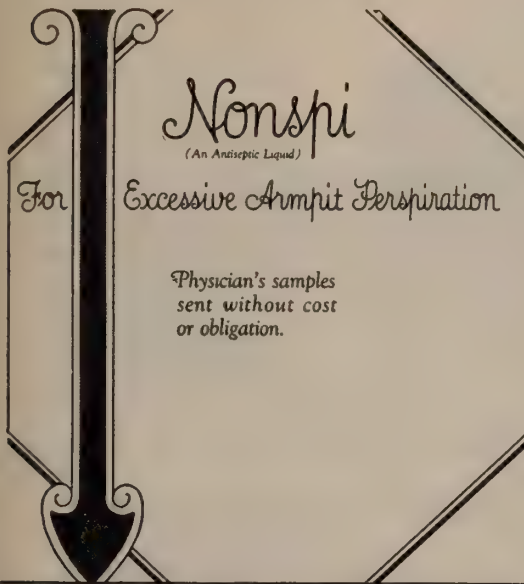
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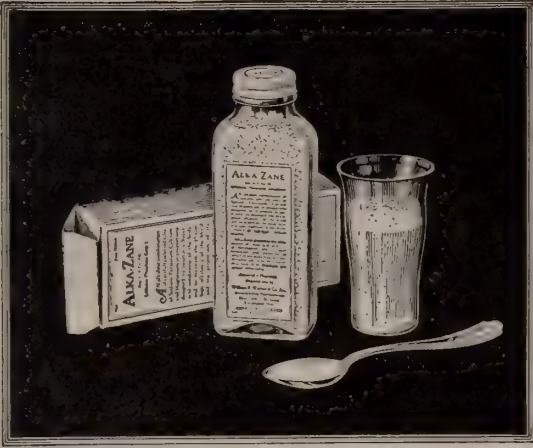
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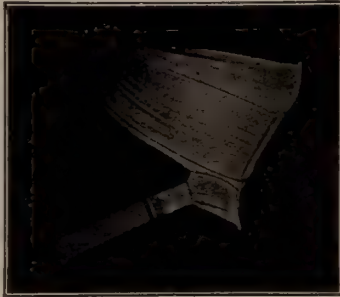
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**DISEASES OF THE SKIN.** By Henry H. Hazen, M. D.  
Third edition. Two hundred and forty-eight illustrations, including two color plates. St. Louis. 1927.  
Price \$10.00.

In this edition the author has made a number of changes. The diseases have been classified according to their etiology. In conformity with this the word "eczema" has been omitted. Anaphylactic dermatitis has received considerable mention. The X-Ray, radium, unipolar and bipolar fulguration and the Alpine lamp chapters have been carefully revised. A number of new illustrations have been included.

**NUTRITION AND DIET IN HEALTH AND DISEASE.** By James S. McLester, M. D., Professor of Medicine, Graduate School of Medicine, University of Alabama, Birmingham, Ala. Octavo of 783 pages. Philadelphia and London. W. B. Saunders Company. 1927. Cloth, \$8.00 net.

This book has been written from the viewpoint of the physician whose interests are general. For the sake of clearness the author has included much that belongs to the basic sciences, the intimate relationship of this to the man is evident. Throughout the work the author has two ideals in view: first, to show the patient's nutritive needs in dietary regulation and second, the past experience in treatment. He shows that

(Continued on page 48)

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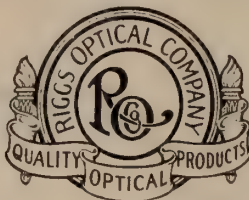
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## Book Reviews

(Continued from page 47)

the former is often neglected and the latter frequently given undue weight; he has endeavored to balance these two—to base dietary rules on nutrition of requirement, and to arrange the details according to the knowledge obtained from experience.

**OPIUM.** By John Palmer Gavit. With an introductory note for American readers. New York. Brentano's. 1927. Price \$3.50.

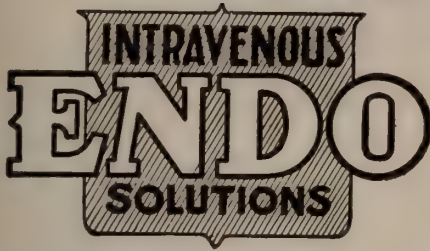
In this work the author shows that the drug traffic

is a threat to social order and safety in American cities. Mr. Gavit shows the association between the opium problem and the direct perils which it represents in the life of every nation. The opium menace is as much an American problem as it is a Chinese.

**NERVE TRACTS OF THE BRAIN AND CHORD.** By William Keiller. New York. The Macmillan Company. 1927. Price \$8.00.

This work covers the subject of anatomy, physiology and applied neurology. It is based on the author's experience in teaching anatomy of the brain and chord covering a period of twenty years.

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"That is not an engagement. That is an option."—*Washington Star*.

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Jack—"How did you come to marry a girl you didn't particularly care for?"

Tom (gloomily)—I attribute it to the fact that she wanted me worse than I didn't want her."—*Boston Transcript*.

### JUDGES OF WHAT?

Another raid Monday night by the same officers, at the home of Henry Kischenmock on the river bank, resulted in his arrest. Judges, bottles and a small quantity of liquor were found.—*Burlington (Iowa) paper*.



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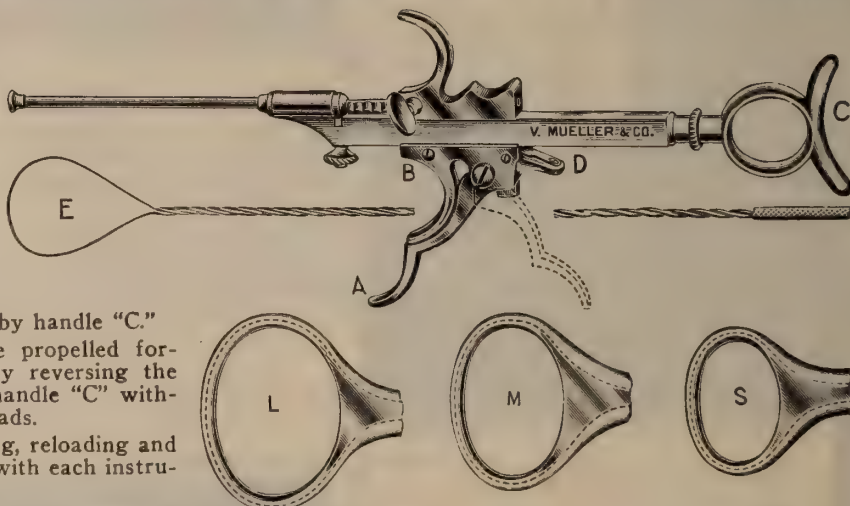
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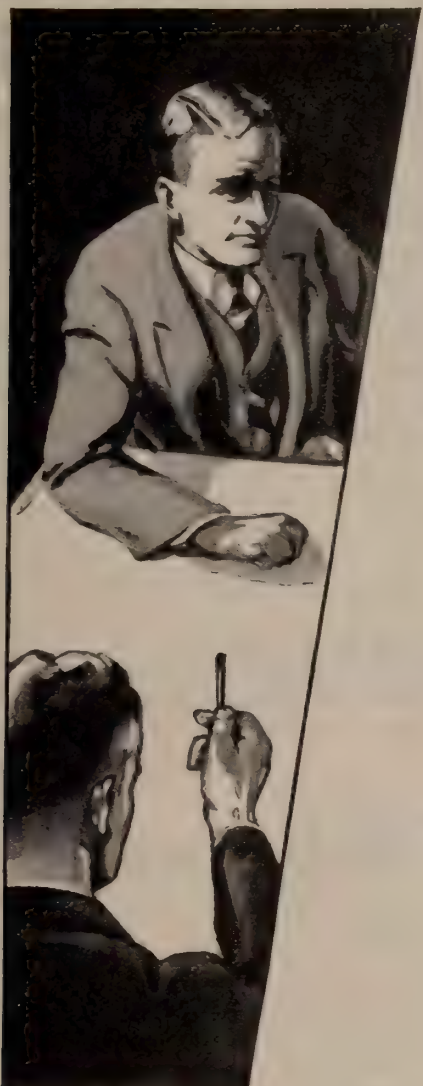
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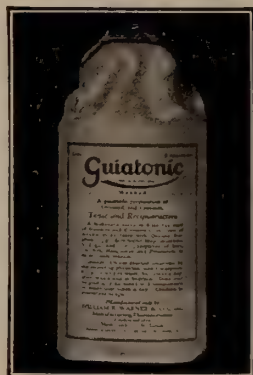


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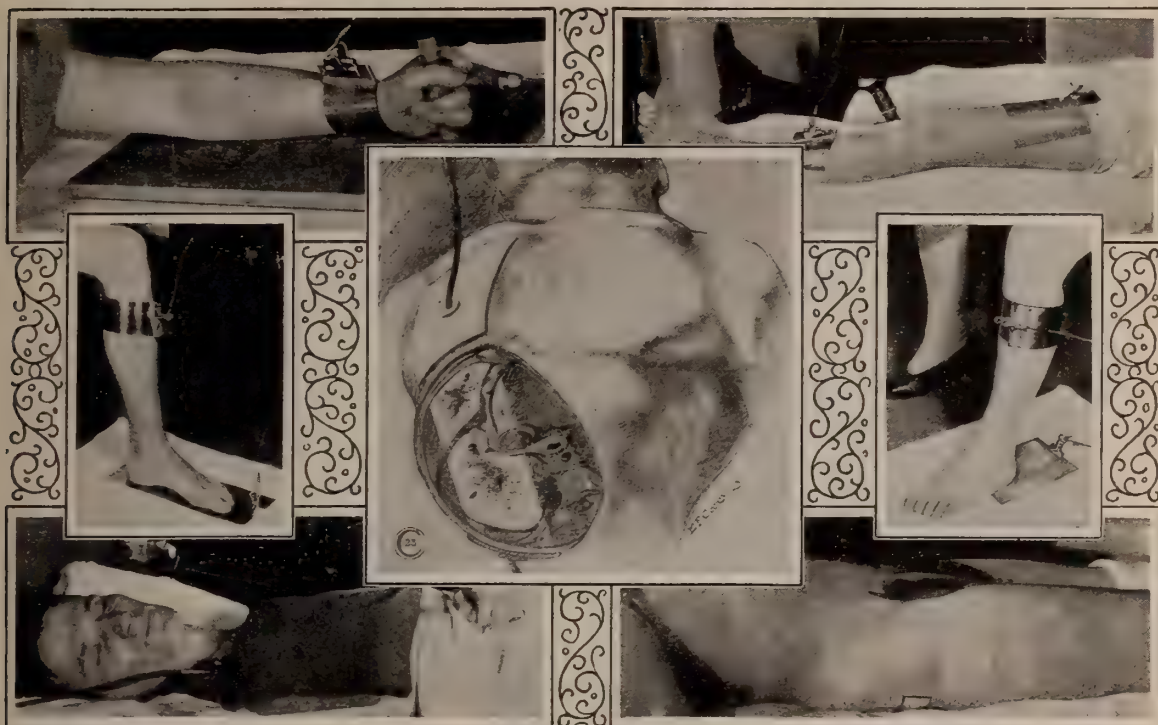
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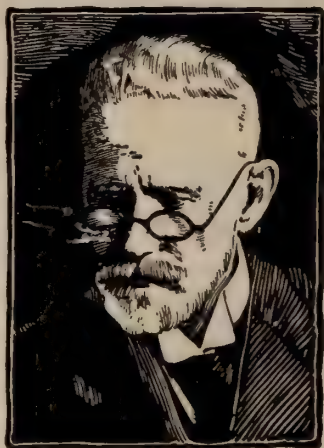
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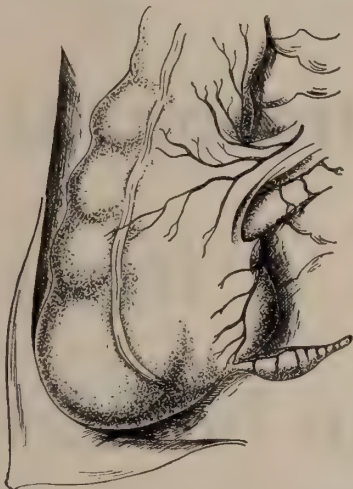
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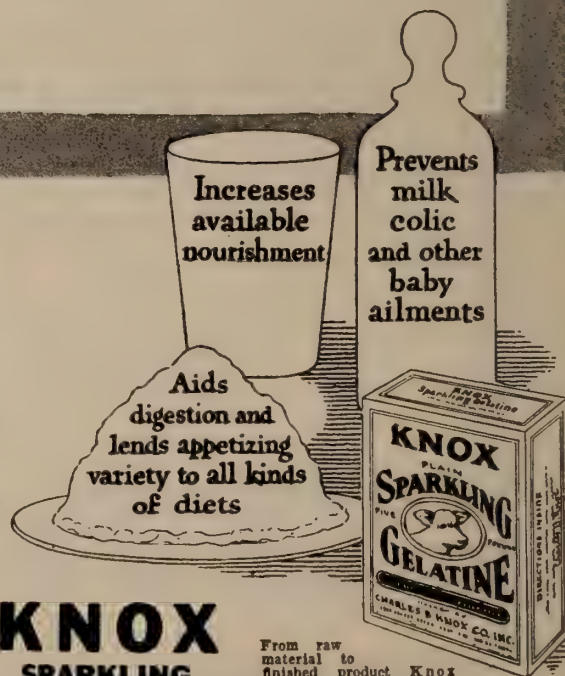
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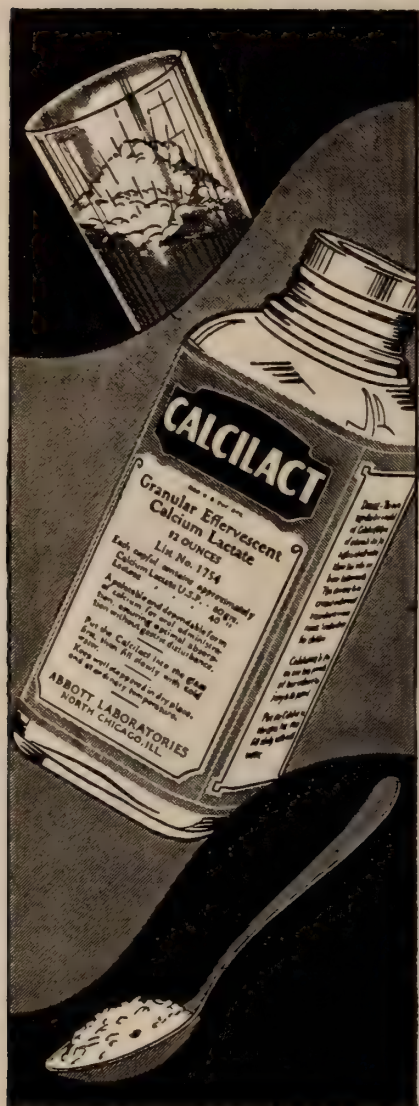
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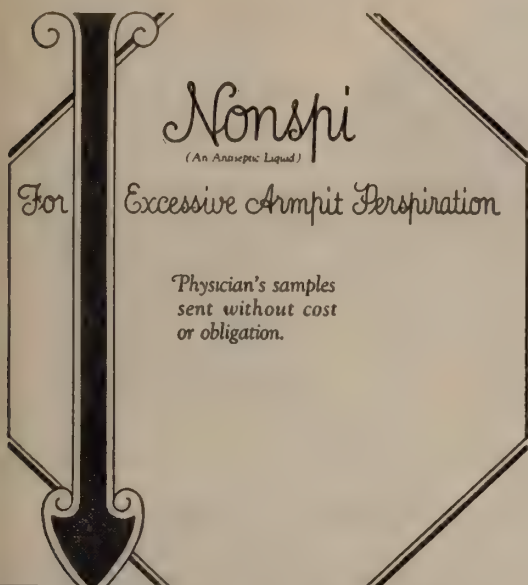
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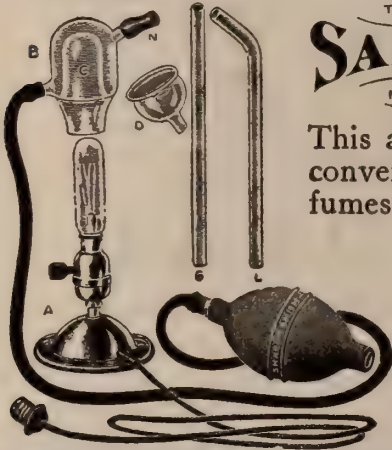
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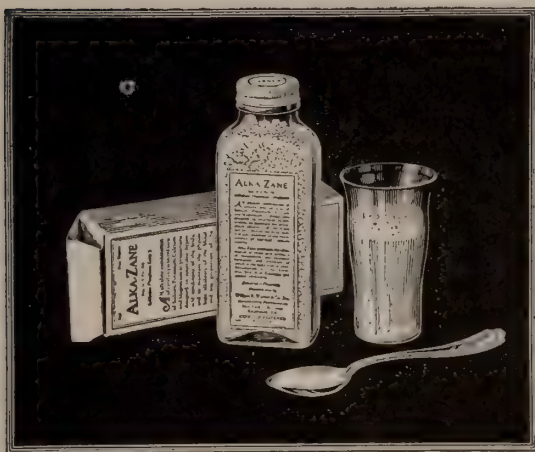
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THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month). Volume 7, Number 5. (Pacific Coast Surgical Association Number—October, 1927.) 266 pages with 132 illustrations. Per clinic year (February, 1927, to December, 1927). Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The contributors to this number are Drs. Brown, Brunn, Burger, Caldbrick, Coffey, Delprat, Dillehunt, Dwyer, Everingham, Gilcreest, Hinman, Holden, Lamson, Lobingier, Lockwood, Mason, Matthews, McNertny, Morrison, Palmer, Sturgeon, Swift, Weeks,

INTERNATIONAL CLINICS QUARTERLY. Edited by Henry W. Cattell, M. D. Vol. IV., thirty-seventh series. 1927. Philadelphia and London. J. P. Lippincott Company. 1927.

This is a volume of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, neurology, pediatrics, obstetrics, gynecology, orthopedics, pathology, dermatology, ophthalmology, otology, rhinology, laryngology hygiene, and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world.

LECTURES ON THE BIOLOGIC ASPECTS OF COLLOID AND PHYSIOLOGIC CHEMISTRY. A series of lectures given at the Mayo Foundation and the Universities of Wisconsin, Minnesota, Iowa, Washington (St. Louis), and the Des Moines Academy of Medicine, Iowa. 1925-26. 12mo of 244 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1927. Cloth, \$2.50 net.

This work covers a number of important aspects of recent investigation in the field of colloid chemistry from the biologic standpoint. This work is of interest to chemists, physicians and biologists.

AN INTRODUCTORY COURSE IN OPHTHALMIC OPTICS. By Alfred Cowan, M. D. With 121 illustrations, many in colors. Philadelphia. F. A. Davis Company. Price \$3.50.

The purpose of this volume is to convey a working knowledge of ophthalmic optics to students and practitioners. The work is the outgrowth of the author's notes in his combined lecture and laboratory course in the graduate school of medicine of the University of Pennsylvania.

OPHTHALMOSCOPY, RETINOSCOPY AND REFRACTION. By W. A. Fischer, M. D. Second revised and enlarged edition with 260 illustrations, including 48 colored

(Continued on page 49)



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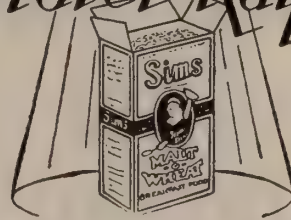
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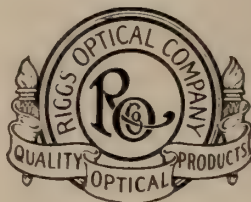
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## Book Reviews

(Continued from page 43)

plates. Philadelphia. F. A. Davis Company, 1927. Price \$3.75.

This edition contains many new half tones and colored illustrations, a new chapter has been added, which includes: First, the red-free light of Vogt. Second, the gull strand binocular ophthalmoscope. Third, microscopy of the living eye by slit lamp illumination.

**THE PRINCIPLES OF SANITATION.** By C. H. Kibbey. With 34 illustrations, including 5 colored plates. Philadelphia. F. A. Davis Company, 1927. Price \$3.50.

This is intended as a practical hand book for public health workers. It prescribes a course of reading calculated to instruct sanitary inspectors along the lines of knowledge with which they should be familiar.

**THE INFANCY OF MEDICINE.** By Dan McKenzia. London. MacMillan & Co., Ltd. 1927. Price.

An inquiry into the influence of folk-lore upon the evolution of scientific medicine. This book attempts to show in what manner and to what extent primitive thought has influenced the evolution of the science and art of medicine.

**CLINICAL LABORATORY PROCEDURES.** By George L. Rohdenburg, M. D. New York. The Macmillan Company, 1927. Price \$3.25.

This volume is a collection of laboratory methods which the author after a period of years of actual use find simple and accurate. He presents concisely procedures frequently undertaken in routine work.

**TOBACCO AND PHYSICAL EFFICIENCY.** A digest of clinical data. By Pierre Schrupf Pierron, M. D. Preface by Henri Vaquez, M. D. Published under the auspices of the Committee to Study the Tobacco Problem with a foreword by Alexander Lambert, M. D. New York. Paul B. Hoeber, Inc. 1927. Price \$1.85.

This book meets a distinct need. It is the first really complete compendium of the vast amount of literature of various countries concerning the effects of tobacco upon the human system. It shows that the action of nicotine upon the heart is very remarkable, that tobacco cannot be freely indulged in without normal action of that organ. The work is founded on clinical experience and shows that the excessive use of tobacco in young persons quickly induced disturbances of cardiac rhythm, that if the tobacco habit is persisted in these disturbances may in time, after a period of excessive irritation, weaken the heart's action, without there being on that account any myocardial impairment. The work is timely and we highly recommend it for general distribution among the younger generation.

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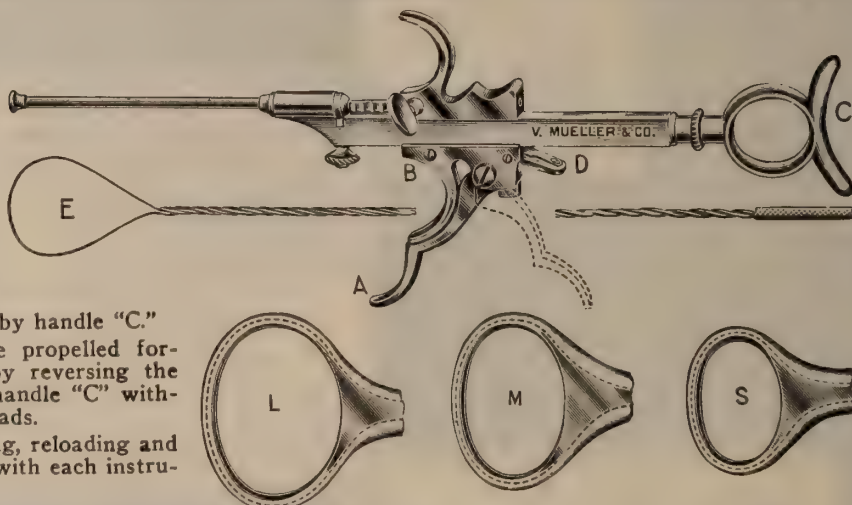
## THE NEW IMPROVED PIERCE-MUELLER TONSIL SNARE

Quickly converted  
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Tonsillectome.

Has several new fea-  
tures. Carriage re-  
lease lever "D" is  
placed below bar  
containing long ecraseur screw controlled by handle "C."

Carriage "B" may be propelled forward for reloading by reversing the ecraseur screw with handle "C" without stripping the threads.

Instructions for loading, reloading and general care included with each instrument.



Pierce-Mueller Tonsil Snare complete with Canula and 12 Wire Loops.....	\$10.00
Beck Tonsillectome Loops, S. M. & L. Each.....	2.00
Prepared Snare Wires for Beck Tonsillectome Loops. S. M. & L., per dozen.....	.50

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## *In Cases of Intestinal Stasis*

Stanolind Liquid Paraffin (Heavy) is ideally suited to the treatment of intestinal stasis in all its stages.

This superior mineral oil is so refined as to insure absolute freedom from impurities. It is odorless and tasteless and not in the least unpleasant to take. Its unusually heavy body insures a slow passage through the intestinal tract thus allowing sufficient time for the entire contents to become thoroughly softened to permit easy and complete elimination.

## STANOLIND LIQUID PARAFFIN (Heavy)

has a higher viscosity than other mineral oils on the market. Its viscosity, (300-310 Saybolt at 37.7° C.) minimizes the danger of leakage.

Stanolind Liquid Paraffin (Heavy) is obtainable at most hospitals and drug stores. It is sold only in bulk and never is advertised to the general public.

*Stanolind Laboratories*

**STANDARD OIL COMPANY**

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*Manufacturers of High Grade Medicinal Oils*

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A  
valuable  
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to the  
dietary  
of infants  
and  
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WITH COD LIVER OIL



For years, physicians have regarded cod liver oil as the standard antirachitic. It is generally prescribed by physicians in the treatment of strumous and tubercular diathesis and other wasting affections.

Maltine with Cod Liver Oil is thirty per cent cod liver oil. Seventy per cent of it is an extract made up of the nourishing elements of barley, wheat and oats. Rich in maltose, dextrose and dextrin, it is readily digested.

As an adjunct to the dietary of infants and children—as an easily assimilated food, Maltine With Cod Liver Oil is preferred by many physicians to cod liver oil alone. It is a pure and dependable preparation. It is far more palatable than plain cod liver oil.

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Malto-Yerbine	<input type="checkbox"/>		
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We will send to physicians free samples of any of the Maltine products and the booklet, "The Maltine Preparations." Please check those which you desire:

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AND  
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*Three small doses of one c.c. each given at 5 to 7 day intervals  
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The lack of strength, easy fatigability and general muscular and mental inefficiency of convalescence may be relieved by

## Hormotone

an endocrine prescription which stimulates metabolism, frees the organism of accumulated toxic fatigue products, increases the energy and restores the patient to normal strength and well being.



### A TRUE ENDOCRINE TONIC

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*Dependable Gland Products*

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## Coated Tongue and Toxemia

Coating on the tongue consists of epithelial cells, molds, yeast and many bacteria, some highly virulent. Normally the saliva prevents growth of the latter. If the resistance of the blood is lowered, the saliva loses its germ-destroying and inhibiting power. A tongue coating appears.

In the constipated colon, putrefactive bacteria produce highly active poisons such as skatol, indol, etc. These enter the blood, lower its resistance and thus weaken all fluid secretions such as the saliva. No wonder 85% of all sick people have coated tongues. Constipation is almost universal among the sick.

If the tongue indicates toxemia, prescribe Nujol—the safe and effective treatment.

Many intestinal toxins are themselves absorbed by Nujol. Once absorbed by Nujol, they cannot be absorbed by the system, as Nujol itself is non-absorbable.

# Nujol

REG. U.S. PAT. OFF.

*In* **GRIPPE**  
**INFLUENZA**  
**PNEUMONIA**

*To gain Rest and Sleep*

use 1 to 2 tablets of

**ALLONAL**

The  
 non-narcotic  
 SEDATIVE  
 ANALGETIC  
 HYPNOTIC



REST AND SLEEP, so greatly desired and of such vital importance in combating grippe, influenza and pneumonia, can be effectively secured by the use of Allonal.

Rest and sleep, without doubt, are Nature's most valuable aids in her fight against infections.

*Not depressing to heart or respiration*

Thousands of physicians who have discovered its value are prescribing Allonal in place of the older hypnotics.

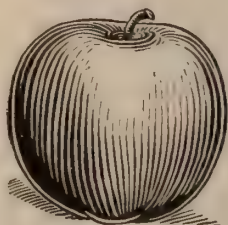
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*Makers of Medicines of Rare Quality*

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“An Apple a Day  
Keeps the Doctor  
Away”

Maybe it does, and maybe it doesn't; although we have our own opinion as to the truth of this little saying. We do know one thing, however: *All the apples in the world won't keep the doctor away when he really is needed.* But, when a fellow is run down, his blood-pressure is low, and he seems to have no more pep than a snail, *he doesn't want apples.* His endocrines are played out. What he needs most of all is *adrenal support*, and when the doctor arrives on the scene he sees that his patient gets it, usually in the form of

*Adreno-Spermin Co. (Harrower)*

a combination of adrenal substance and its chief synergists, thyroid and spermin.

One sanitable, four times a day, works wonders in most cases of hypoadrenia, asthenia, neurasthenia, and slow convalescence following acute infections and infectious diseases.

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THE HARROWER LABORATORY, Inc.  
Glendale, California

*The New*

# Horlick's Milk Modifier

*A superior  
Maltose and Dextrin prod-  
uct for infant feeding*

## What Horlick Quality means:

1. The maltose and dextrin is derived entirely from processed barley malt and wheat, and the product is therefore superior to those made from starch.

2. The malt is of the highest grade, made in our own malt houses, in order to obtain the maximum convertive effect of the diastasic enzyme.

3. The grains supply readily soluble protein and mineral salts, of value in artificial feeding. The cereal protein is a colloid which aids in inhibiting the formation of tough curds in the infant's stomach.

4. The proportions of maltose 63% and dextrin 19.5% make the product of special usefulness in regulating the infant's bowels.

*For use as a milk modifier on  
prescription by physicians.*

*Directions and circulars are sup-  
plied to physicians only.*

Samples prepaid on request to  
**Horlick—Racine, Wis., U. S. A.**

# What stands behind modern practice?

The medical profession is secure today in the prestige it has earned. Extraordinary achievement has won it the profound confidence of society. Old woman's talk, family remedies, fear of the physician's bag and the surgeon's scalpel, have little place in the modern home that looks with confidence to its doctor and with almost blind faith to the surgeon.

But what of the materials with which doctors and surgeons work their miracles? *They must have confidence equal to that of their patients in the materials with which they work!*

For a third of a century Armour Laboratory has been collaborating with the medical profession. Because of its vast resources of fresh material, and the scientific thoroughness with which these materials are prepared, Armour Laboratory has long been recognized as "headquarters for medical supplies of animal origin."

Of especial value to modern practitioners are Armour's Suprarenal Substance—Thyroid—Corpus Luteum—Ovarian Substance—Pituitary—Parathyroid.

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## Antimony and Potassium Tartrate Intravenously Loeser's Intravenous Solution of Antimony and Potassium Tartrate Tartar Emetic

A standardized sterile solution in hermetically sealed Jena glass ampoules. Ten c. c. contain 100 mgs. (1½ grain) Antimony and Potassium Tartrate.

The current literature indicates the successful employment of Antimony and Potassium Tartrate intravenously in the treatment of Granuloma Inguinal, Chancroid, Bilharziasis, Kalazar, Leishmaniasis and Vincent's Angina.

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### *Constipation in Infancy*

THE fact that Mellin's Food makes the curd of milk soft and flaky when used as the modifier is a matter to always have in mind when it becomes necessary to relieve constipation in the bottle-fed baby; for tough, tenacious masses of casein resulting from the coagulation of ingested milk, not properly modified, is a frequent cause of constipation in infancy.

THE fact that Mellin's Food is free from starch and relatively low in dextrins, are other matters for early consideration in attempting to overcome constipation caused from the use of modifiers containing starch or carbohydrate compounds having a high dextrins content.

THE fact that Mellin's Food modifications have a practically unlimited range of adjustment is also worthy of attention when constipation is caused by fat intolerance, or an excess of all food elements, or a daily intake of food far below normal requirements, for all such errors of diet are easily corrected by following the system of infant feeding that employs Mellin's Food as the milk modifier.

Physicians who are interested in this subject matter will find it presented in a rational manner in a pamphlet entitled "*Constipation in Infancy*", a copy of which will be mailed promptly upon request.

Mellin's Food Company,

177 State Street,

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“Dried pure yeast is the richest “P-P” containing food at present known. It is also very rich in protein and in the beri-beri preventing vitamin, so that it should rate high as a food . . . for use as a food the yeast plant should preferably be dead.”

*Extract from  
U. S. Public Health  
Report*

## Dried Yeast Best Anti-Pellagra Food

THE above extract from the United States Public Health Reports agrees precisely with the findings of all investigators of pellagra.

+ + +

For the use of physicians we can supply clean dried dead yeast cells in bulk or in 0.5 gram tablets. This yeast (widely known in tablet form under its trade name Yeast Foam Tablets) is recognized as the standard for use in vitamin studies by investigators of the leading universities of the nation and of the U. S. Government. Its potency is controlled by accepted biological standards; its vitamin B and protein content are guaranteed; it will not ferment nor cause gas. Price of this yeast, powdered or in tablets, as well as further information may be had on request.

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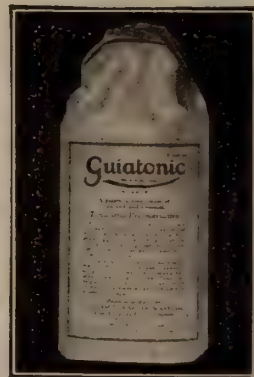
Northwestern Yeast Co., 1750 No. Ashland Avenue, Chicago, Illinois. World's largest makers of dried yeast. Manufacturers of Yeast Foam and Magic Yeast (for baking), Yeast Foam Tablets, Yeast Foam Malted Milk, Animal - Poultry Yeast Foam.



## After the Storm

of acute infections, the shock of surgical intervention, there is need of a staff on which to lean during the trying time of convalescence.

A systemic tonic, Guiatonic supplies such a dependable support, and by stimulating general metabolism as well as increasing the hemoglobin content of the blood, it markedly shortens the period of convalescence.



A palatable preparation of special salts of guaiacol and creosote which may be freely given to the weakest patient, without fear of gastric disturbance. It contains no narcotics.

Indicated in all depressed or debilitated conditions, or whenever a tonic is required.

## Guiatonic

*A generous trial quantity free upon request. William R. Warner & Company, Inc., Manufacturing Pharmacutists since 1856. 113-123 West 18th Street, New York City*

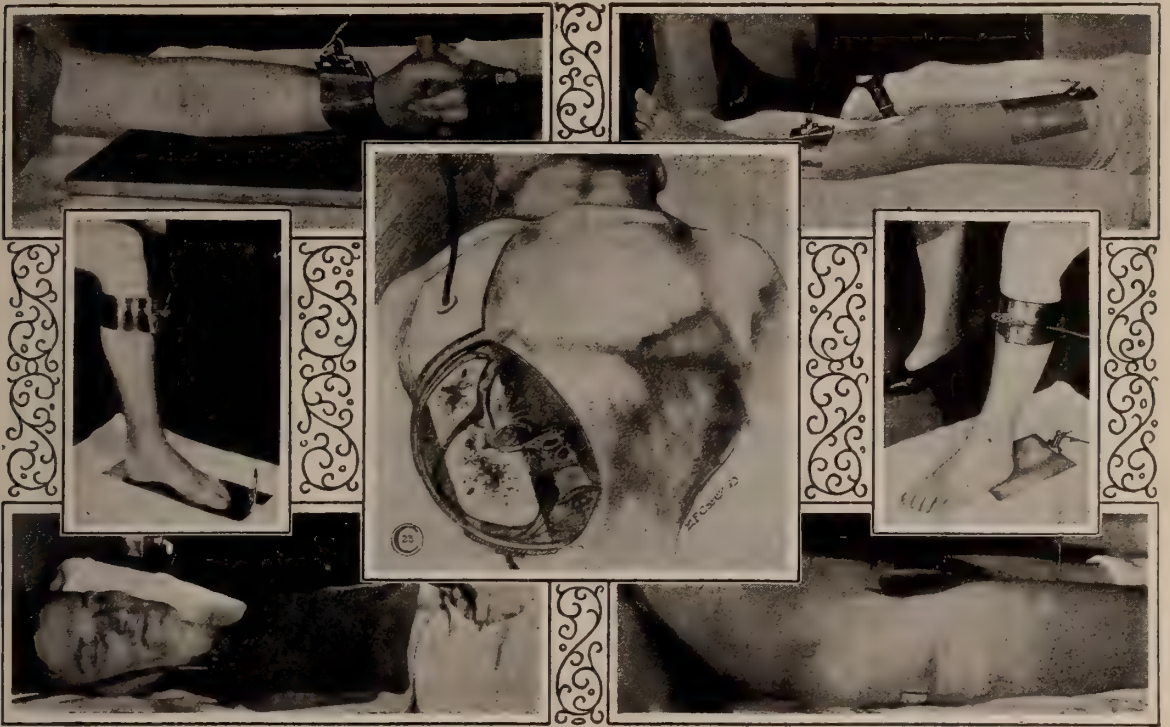
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### Hagee's Cordial

[Cord. Ext. Ol. Morrhuæ Comp. (Hagee)]

contains the essential elements of PURE COD LIVER OIL, unchanged and unaffected. The fat, which contains the fishy taste, has been eliminated—not merely disguised, but entirely removed. Glycerophosphates of calcium and sodium have been added, and the finished product made pleasant to the taste. Prescribed by physicians and dispensed by druggists everywhere. Let us send you a sample. Address Katharmon Chemical Company, 101-E N. Main St., St. Louis, Missouri.

**CORD. EXT. OL. MORRHUÆ COMP. (Hagee)**



# DIATHERMY

## A Means of Generating Heat Within the Tissues



THE VICTOR VARIO-  
FREQUENCY DIATHERMY  
APPARATUS

A composite of every approved principle thus far applied in the design of diathermy apparatus.

THAT is the simplest definition of medical diathermy. In other words, it is the application of the particular form of high-frequency current that produces this effect. It does not come under the category of the hot water bottle, electric heating pads and other similar devices which are basically surface applicators.

Consider then a deep seated condition indicating the use of heat. With an apparatus of correct design you can in a few minutes produce any desired degree of heat within, from the point of perception up to the tolerance of the patient.

A modern, correctly designed diathermy machine has proved its value to thousands of physicians in practically every branch of medicine. Our *Reprint Library Service* can undoubtedly refer you to authoritative literature citing clinical results with diathermy in conditions common to your practice, whether general or specialized. Your inquiry will not obligate you in any way.

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Manufacturers of the Coolidge Tube and complete line of X-Ray Apparatus



Physical Therapy Apparatus, Electrocardiographs, and other Specialties

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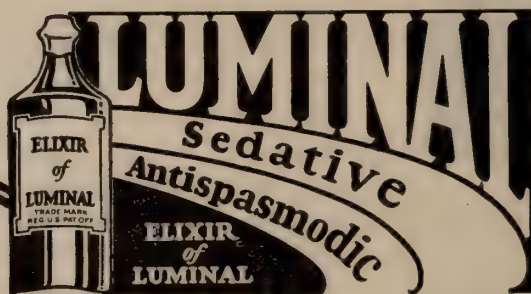
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**T**HE demonstrated superiority of Luminal in the treatment of epilepsy has led to its use in various other functional affections of the nervous system. Prominent among these are migraine, chorea, neurasthenia, cardiac and gastric neuroses, as well as the nervous symptoms of dysmenorrhea and the menopause.

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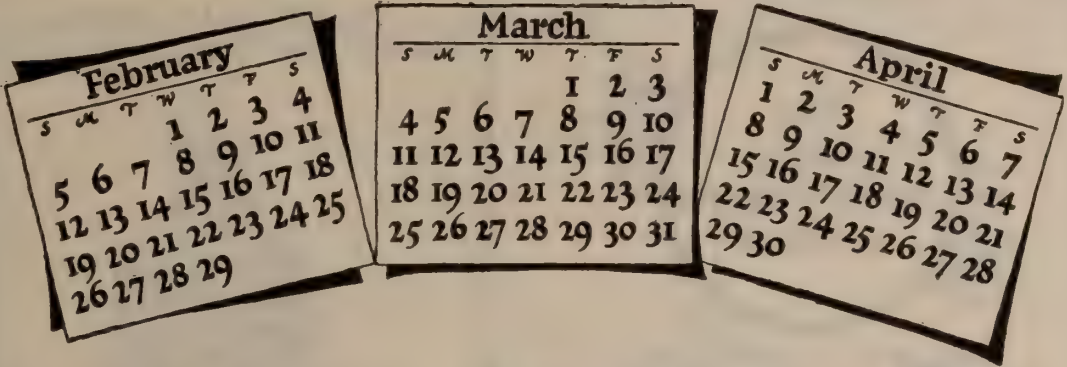
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## CHEMICAL COMPANY, INC.

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## Acute Affections of the Chest and Lungs

more effectively treated  
during these **3** months with

# Antiphlogistine

**U**SED by the Medical Profession the world over as the dressing of proven efficacy in the management of pleurisy, bronchitis and allied chest conditions.

A moment's reflection on the composition of ANTIPHLOGISTINE—with its c. p. Glycerine blended in synergistic coordination with the mildly stimulating boric and salicylic acids, compounds of iodine, and the oils of menthol, gaultheria, and eucalyptus—coupled with a test on a selected case, will persuade the modern practitioner that there is a definite basis for the adoption of Antiphlogistine as the treatment of choice in all those cases involving inflammatory and congestive conditions where the application and maintenance of continuous moist heat is so helpful.

The Denver Chemical Mfg. Co.,  
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Dear Sirs:

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### ANALYSIS:

C. P. Glycerine.....	45.000%
Iodine .....	0.01 %
Boric Acid.....	0.1 %
Salicylic Acid.....	0.02 %
Essence of Menthol.....	0.002%
Essence of Gaultheria.....	0.002%
Essence of Eucalyptus.....	0.002%
Mineral Clay.....	54.864%



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The driver of a Ford sedan, who was plainly out of his element in city traffic, attempted to turn around in the middle of a block, and was side-swiped and upset by a hook and ladder fire truck on its way to answer a call.

Striding over to the overturned vehicle, a traffic officer poked his head through the broken window and demanded, "What do you mean by blocking traffic like this? C'mon outta there; you're pinched!"

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## Sealed Amber Bottles Protect The Vitamin Potency Of



## PATCH'S FLAVORED COD LIVER OIL

It is now generally agreed that cod liver oil is the richest source of vitamin A and anti-rachitic vitamin. In the administration of cod liver oil, however, much depends upon the vitamin potency of the oil which is prescribed.

Patch's Flavored Cod Liver Oil is recognized by the profession as a dependable highly potent product which gives definite results.

This product is made in the Patch Company plants along the North Atlantic Coast from strictly fresh livers. In addition to the land plants the Patch Company operates cookers on trawlers which sail out of the New England ports. On these trawlers the oil is made within a very short time after the fish are hauled in over the side of the boat.

A sample of every lot of oil produced is biologically assayed. The vitamin potency is guaranteed. In order to preserve the high vitamin potency Patch's Flavored Cod Liver Oil is bottled at once in amber glass bottles to keep out the light. It is also promptly sealed to keep out the air.

These precautions are taken because light and air destroy vitamin potency. Thus Patch's Flavored Cod Liver Oil reaches the patient in its original potent condition.

Children really enjoy Patch's Flavored Cod Liver Oil because it tastes good. If you can give a small dose of highly potent and pleasantly flavored cod liver oil the problem of administration is solved.

Send the coupon below for sample and descriptive literature.

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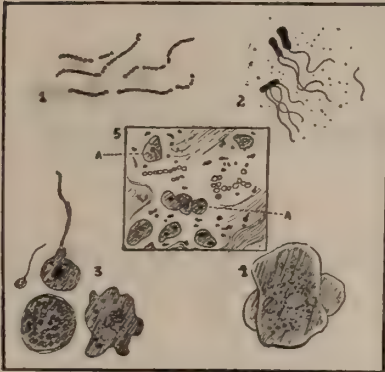
Send a sample of Patch's Flavored Cod Liver Oil and literature.

Name .....

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# When the Colon Bacilli Revolt



## Some intestinal enemies:

1. Streptococci. 2. Bacillus typhosus, flagellate form. 3. Craigia hominis. 4. Entameba coli. 5. Entameba histolytica. "A" shows ameba containing remnants of ingested red blood cells.

WHEN the normally non-pathogenic colon bacilli rebel under the influence of foreign invaders or because of the putrefaction and toxemia resulting from constipation and fecal impaction, the consequences may be grave in the extreme.

The logical treatment is obviously preventive. In all cases of chronic constipation, incipient stasis or fecal impaction, and in certain forms of intestinal toxemia, prompt and efficient evacuation, followed by gradual resumption of normal bowel action, will be obtained by the use of AGAROL, the original mineral oil—agar-agar emulsion.

A generous trial quantity  
sent on request

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Agarol is the original Mineral Oil—Agar-agar Emulsion (with Phenolphthalein) and has these advantages:

Perfect emulsification; stability; pleasant taste without artificial flavoring; free from sugar, alkalies and alcohol; no oil leakage; no griping or pain; no nausea; not habit forming.



When a mother brings you an underweight, undernourished child....the addition of Knox *Sparkling* Gelatine to its milk will prove helpful in correcting the condition!

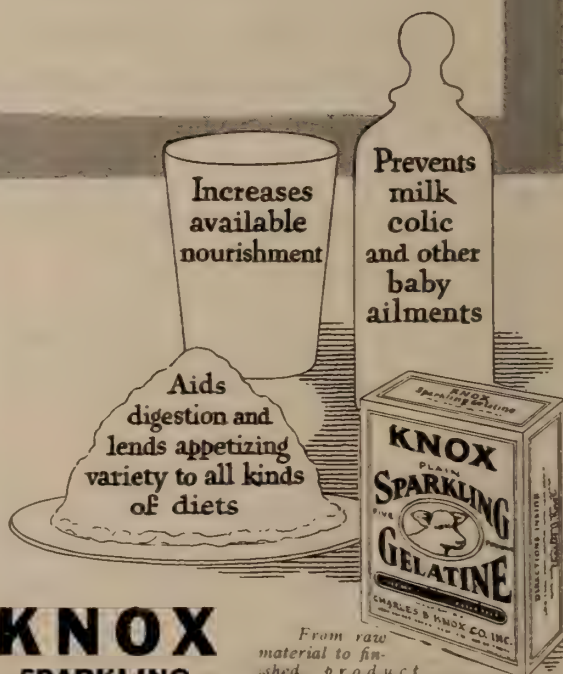
DO you know the facts about *gelatine-and-milk*?—how Knox Gelatine, when dissolved and added to milk, aids digestion and increases the available nourishment!

—Do you know the facts about *gelatine-and-vegetables* or *gelatine-and-fruit*?—that the child finds it more appetizing to eat plenty of fruits and vegetables when they are combined in delicious ways with Knox Sparkling Gelatine!

We believe these facts will help you in your important work with undernourished children.

May we send you the reports—the recommendations—made by authorities, under careful supervision.

**KNOX GELATINE LABORATORIES**  
461 KNOX AVE., JOHNSTOWN, N. Y.



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**SPARKLING**  
**GELATINE**

"The Highest Quality for Health"

From raw material to finished product Knox Sparkling Gelatine is constantly under chemical and bacteriological control, and is never touched by hand while in process of manufacture.

## To Replenish the Fuel

of the human engine is especially important during the winter months when weather inclemencies make added demands on your patient's vitality and tend to delay convalescence.

## Gray's Glycerine Tonic Comp.

(Formula Dr. John P. Gray)

will supply the energy for complete recovery.

During the slow convalescence from infections of the respiratory tract, its restorative and stimulating effect will be gratefully felt, particularly where the digestive tract may have been fatigued by prolonged medication.

*It pays to specify  
"Gray's" — in  
original bottles*

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All Sections—NORTH—EAST—SOUTH—WEST—All Seasons



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The accompanying picture illustrates the first step necessary to be taken, both far and wide, to assure that our variety of pollens shall cover all sections and all seasons, adequately and accurately.

LITERATURE WITH LIST OF POLLENS FOR ANY SECTION AND ANY SEASON ON REQUEST

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*Please note the following quotations from recent medical literature in regard to the use of salts of*

**O-IODOXYBENZOIC ACID**  
*in the treatment of*  
**INFECTIOUS ARTHRITIS**



"Its effects may be little short of miraculous."  
 —*Smith, Boston M. & S. Jrl., Feb. 24, 1927.*

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In gonorrheal arthritis, "Antigonococcic serum . . . or ortho-iodoxybenzoic acid should be administered intravenously, as soon as possible."  
 —*Thomas, J. A. M. A., Dec. 24, 1927.*



We are now marketing Ammonium Ortho-Iodoxybenzoate under the trade name of

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For Intravenous and Rectal Administration.

We are also marketing Calcium Ortho-Iodoxybenzoate under the trade name of

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DEPARTMENT I

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Established 1841

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The Merrell-Soule System of dehydration preserves the nutritive values of the original, expertly made, fluid equivalents. Scientific control assures unmatched uniformity and bacteriological purity. Greater digestibility is imparted by the mechanical breaking up of fat globules and casein. Clinical tests support these claims.

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#### Merrell-Soule POWDERED PROTEIN MILK

Based on the original formula. Recognized as the protein milk of choice by the hundreds of pediatricists who have used it continuously for five years. Prepared in home and hospital with equal facility.

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as cow's whole milk  
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--assures accuracy

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and pure.

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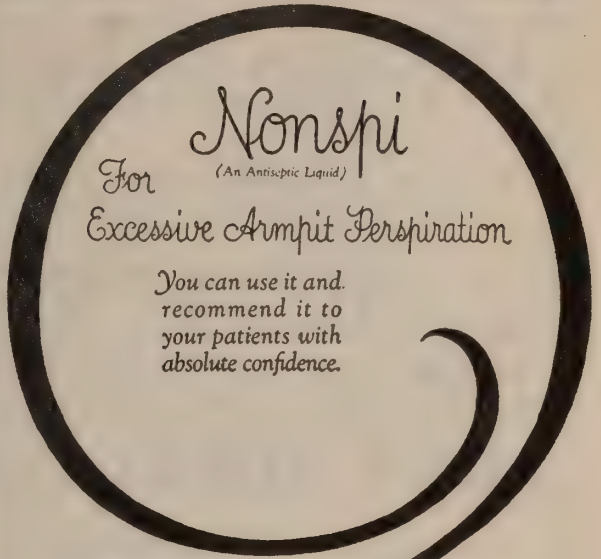
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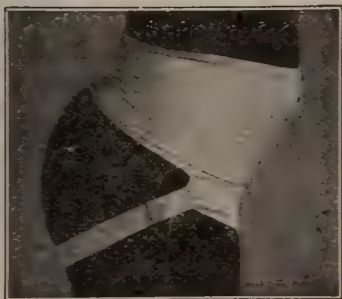
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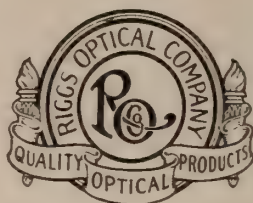


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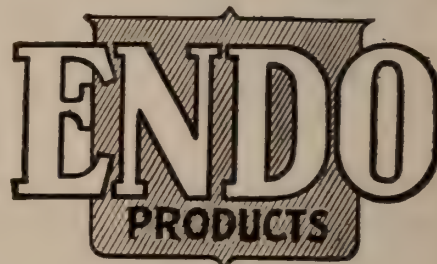
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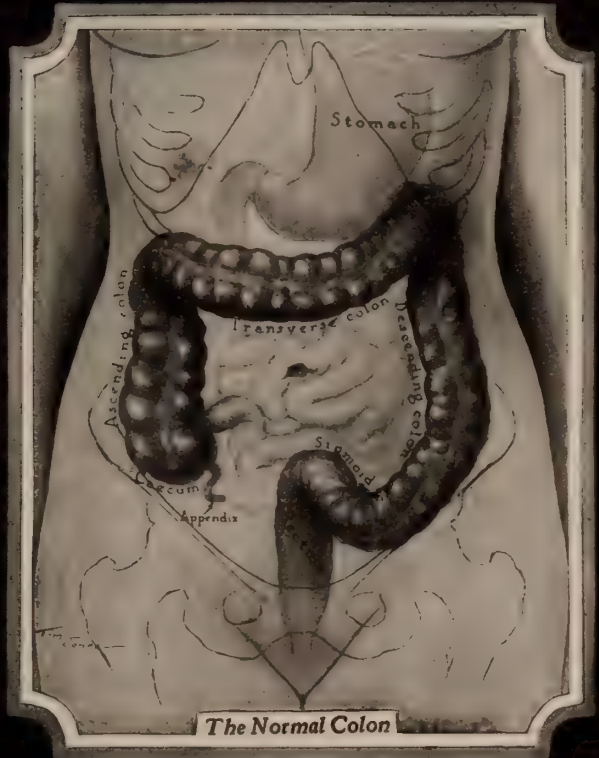
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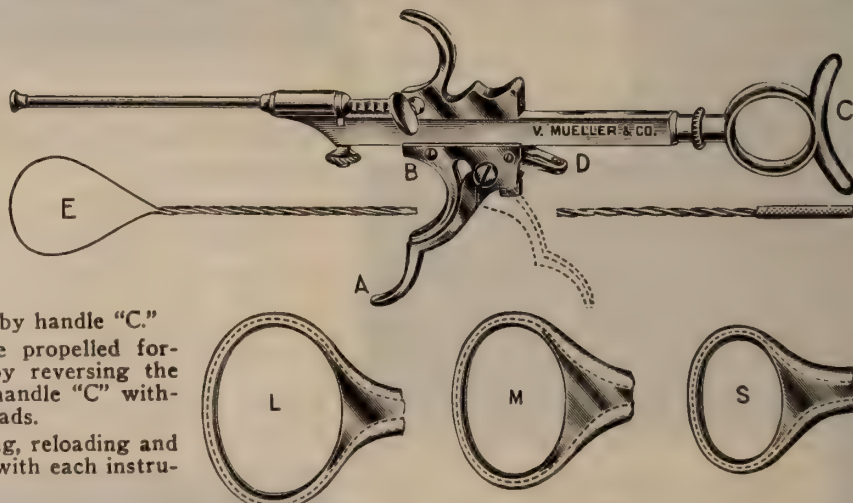
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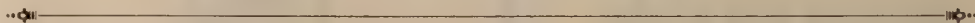


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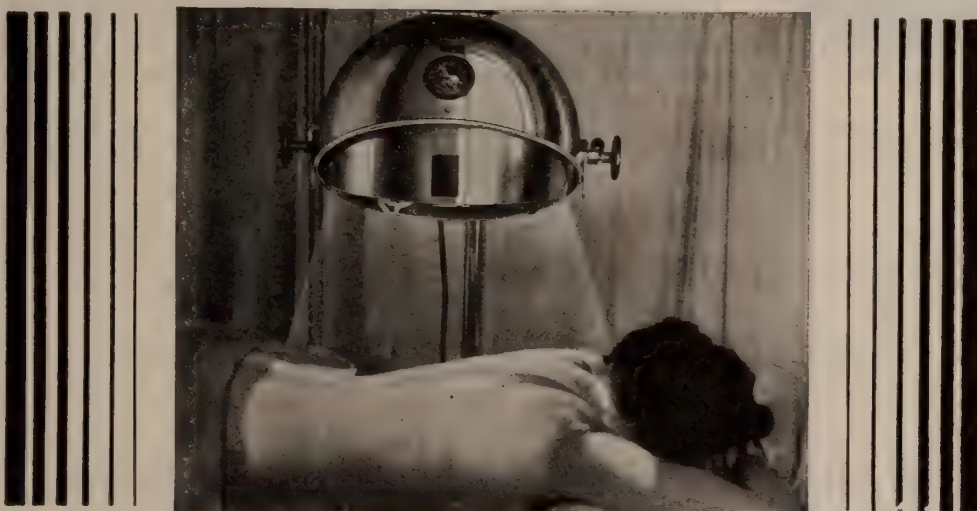
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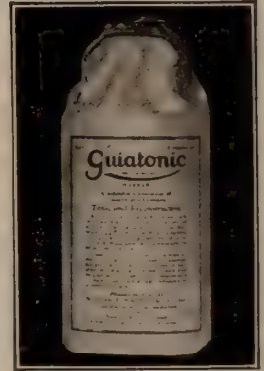
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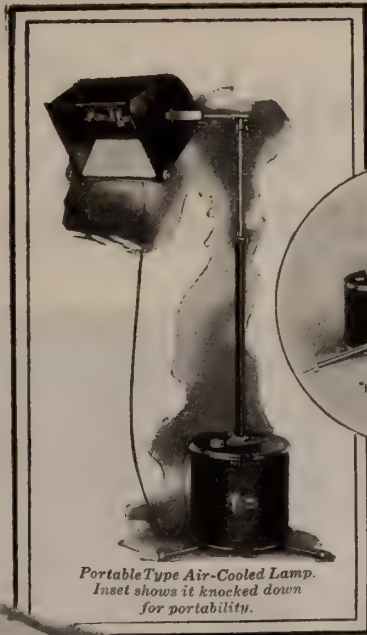
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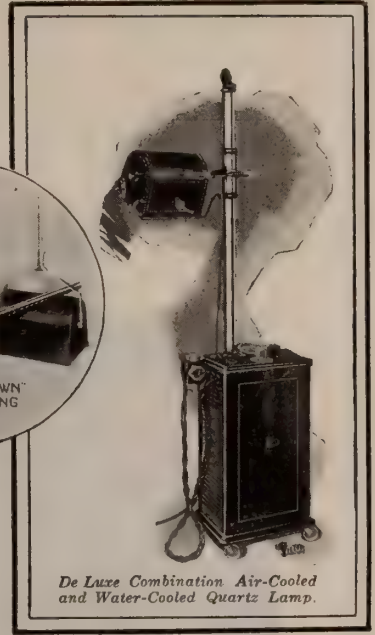
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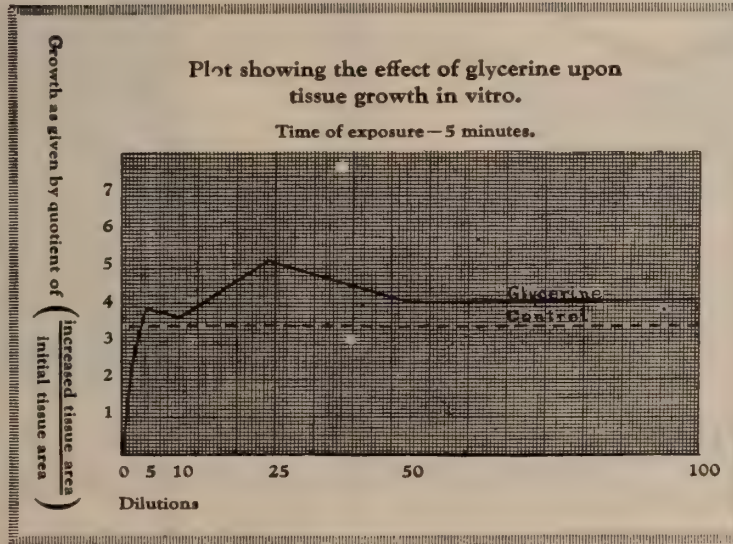
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## Book Reviews

**PRACTICAL THERAPEUTICS.** By Hobart Amory Hare, M. D. Twentieth Edition. Enlarged, thoroughly revised and largely rewritten. Illustrated with 158 engravings and 8 plates. Philadelphia: Lea & Febiger. 1927. Price \$7.50 net.

This is a text book with special reference to the application of remedial measures to disease and their employment upon a rational basis.

In this revision great care has been exercised to make information it contains ready for bedside use and at the same time an endeavor has been made to point out the why and wherefor of the value of each remedial agent and the best method for its use.

**BEDSIDE DIAGNOSIS.** By American Authors, edited by George Blumer, M. D., Clinical Professor of Medicine, Yale University, School of Medicine; Attending Physician to the New Haven Hospital. Three Octavo volumes, totaling 2820 pages, containing 890 illustrations. Philadelphia and London: W. B. Saunders Company, 1928. Cloth, \$30.00 a set. Separate desk index volume free.

In this work an attempt has been made to stress the importance of observation by the unaided senses, or at least by the senses aided only by such simple instruments as the thermometer, the stethoscope, and those examinations which any physician can make without expensive laboratory equipment.

Stressing the importance of physical examination by the special senses is quite timely, there will never come a time when the use of the senses will cease to be the most important factor in diagnosis. Laboratory methods are of great aid in diagnosis and has too often been stressed as first importance in diagnosis when as a matter of fact laboratory is of second importance and is only an aid to diagnosis. In the work different diagnostic methods are mentioned in their proper place and the author shows the relative value of various laboratory procedures as contrasted with the value of ordinary examination in the diseases discussed. The work is timely, up-to-date and should be in the library of every modern physician.

An exhaustive general index to volumes I-II-III accompanies the work.

**TROUBLES WE DON'T TALK ABOUT.** By J. F. Montague, M. D. Illustrated. Philadelphia, London, Chicago, Montreal: J. B. Lippincott Company. 1927. Price \$2.00.

A timely and up-to-date work that should prove of great assistance in educating people to the importance of being examined for what superficially seems to be simple ailments.

**X-RAYS AND RADIUM IN THE TREATMENT OF DISEASES OF THE SKIN.** By George M. McKee, M. D. Second edition. Thoroughly revised. Illustrated with 354

engravings and 31 charts. Philadelphia: Lea & Febiger. 1927. Price \$10.00 net.

In this edition the author has correlated the specialized knowledge of the dermatologists and radiologist. The book has been thoroughly revised and modernized. Every chapter and paragraph dealing with modern technic and apparatus has been rewritten. New chapters on spectroscopy, ionization methods of measurements, and long wave lengths Roentgen therapy have been added. The chapters that have not been rewritten have been revised and the literature has been brought up-to-date.

**THE EXTRA-OCULAR MUSCLES. A Clinical Study of Normal and Abnormal Ocular Motility.** By Luther C. Peter, M. D. Illustrated with 98 engravings and 5 colored plates. Philadelphia: Lea & Febiger. 1927. Price \$4.00 net.

This volume is an amplified presentation of lectures which has been given in a graduate school of medicine in the University of Pennsylvania.

**POLIOMYELITIS WITH ESPECIAL REFERENCE TO THE TREATMENT.** By W. Russell Macausland, M. D. Illustrated with 173 engravings. Philadelphia: Lea & Febiger. 1927. Price \$5.50 net.

In recent years much advance has been made in our study of this disease. The author has searched the voluminous material that has been published on Poliomyelitis, and has incorporated the factors that are recognized as having definite value.

He shows the great progress that is made on the method of treatment, and particularly in the orthopedic field. The author shows how the deformity can now be prevented in nearly every instance; how the return of function can be hastened by proper treatment of the involved era; and, finally by the use of surgical procedure, the wearing of cumbersome apparatus may be obviated in the majority of cases.

**THE SURGICAL CLINICS OF NORTH AMERICA.** (Issued serially, one number every other month.) Volume 8, Number 1. (Lahey Clinic Number—February 1928.) 210 pages with 74 illustrations. Per clinic year (February 1928 to December 1928.) Paper, \$12.00; cloth, \$16.00 net. W. B. Saunders Company, Philadelphia and London.

The contributors to this number are in surgery Drs. Lahey, Clute, Mason and Fife. In Pathology Drs. Smith & Leech. In Medicine Dr. Hurxthal and in Anaesthesia Dr. Sise.

**PHYSICAL DIAGNOSIS.** By Charles Phillips Emerson, M. D. 324 Illustrations. Philadelphia and London. J. P. Lippincott Company. 1928. Price \$7.00.

In recent years because of advance of medical science physical diagnosis has been much neglected. In spite of the so-called advances in science and particularly the X-Ray reports and laboratory findings

physical diagnosis is, and doubtless will remain, the primary and fundamental method of diagnosis. In this work the author has revived the subject of physical diagnosis and has brought to the attention of the profession an up to date work that will prove of great value to the every day practitioner as well as a specialist in medicine.

**THE MEDICAL CLINICS OF NORTH AMERICA.** (Issued serially, one number every other month.) Volume XI, Number III, (Tulane University Number, November, 1927.) Octavo of 210 pages with 46 illustrations. Per clinic year, July, 1927 to May, 1928. Paper, \$12.00; cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company, 1927.

The contributors to this number are Drs. Barrier, Bethea, Daspit, Denney, Duval, Eshleman, Eustis, Herrmann, Hobson, Topkins, Jameson, Johns, Lemann, Mendelson, Menville, Musser, Silverman.

**THE NORMAL DIET.** By W. D. Sampson, M. D. Second Edition. St. Louis. C. V. Mosby Company. 1927. Price \$1.50.

This book is a simple statement of the fundamental principles of diet for the mutual use of physicians and patients.

**MODERN BAKING POWDER.** Compiled by Juanita E. Darrah. Chicago, Illinois. The Commonwealth Press, Inc. 1927. Price \$1.00.

This work after giving the gist of a controversy over the value of various baking powders, discusses several of the important ingredients. Miss Darrah

shows that the amount of aluminum ingested in our every-day diet of fruits, vegetables and meat is many times the quantity that is taken into the body from baking powder products. The book points out that in all government investigations, court proceedings and unbiased investigations of the last fifty years, baking powder containing aluminum compounds has, in every case, been given a clean bill of health. The author goes further and points out that the tendency of modern thought is to ascribe to aluminum a beneficial function in life.

**THIS TOOTH PROPOSITION** by Matthew Joseph Reidy. D. D. S. The Iowa Homestead. Des Moines, Iowa. Price \$1.50.

This work deals with problems that give importance to the ever popular subject of teeth.

**THE MECHANICS OF THE DIGESTIVE TRACT.** By Walter C. Alvarez, M. D. With one hundred illustrations. Second edition. New York. Paul B. Hoeber, Inc. 1928. Price \$7.50.

This is intended as an introduction to gastro-enterology. In the five years that has intervened since the first edition of this work much progress has been made in the subject covered by this work. The bibliography of the present volume, containing nine hundred titles, is probably the best part of the book. The author has incorporated in this work not only the result of his own vast experience but that of every authority on the subject. The subject matter in this volume has been brought up-to-date.

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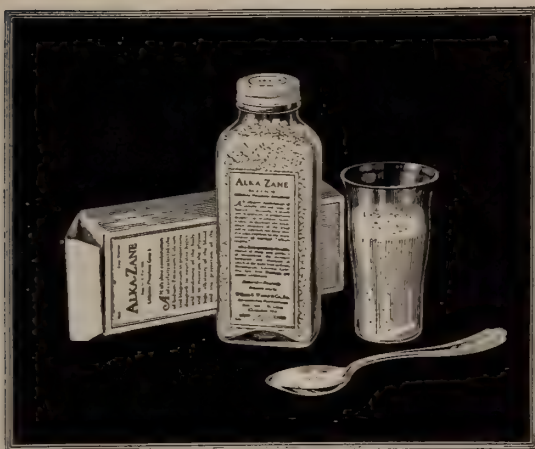
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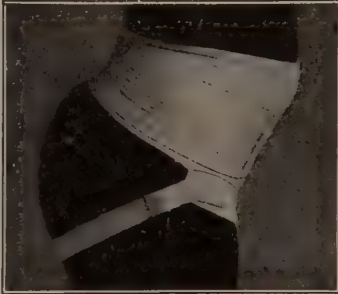
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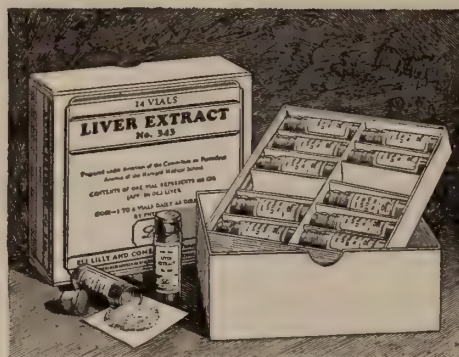
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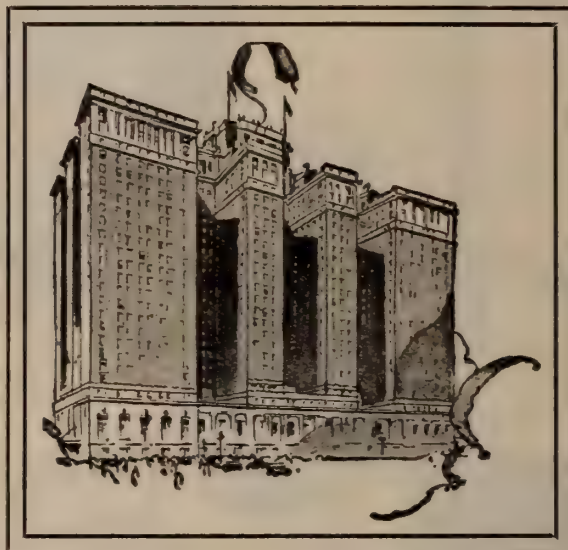
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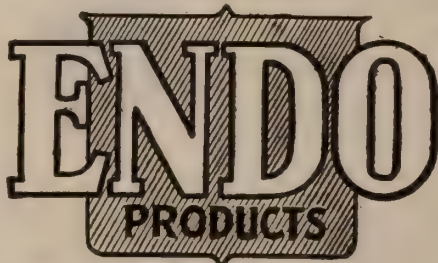
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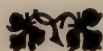
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# A study of Japan green tea as a source of Vitamin C



To substantiate the findings of Miura,<sup>1,2</sup> which have indicated the presence of Vitamin C in Japan green tea, a study<sup>3</sup> has been recently made of the anti-scorbutic value of various teas secured from ordinary commercial sources.

A total of forty guinea pigs was employed for the tests and the curative method was followed. Japan green tea was tested on twelve animals, a fermented tea on nine, a semi-fermented tea on seven. Twelve of the animals were found to be unsatisfactory for inclusion in the final data.

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It is interesting to consider that while oxidation is known to destroy Vitamin C, this tea is prepared by the Japanese according to a method which does not include fermentation. Japan green tea obtained from ordinary com-

mercial sources in this country, is the natural leaf of the tea plant dried by the application of artificial heat. In the opinion of the investigator the presence of Vitamin C in Japan green tea depends upon the fact that it is made up of the unfermented leaves of the tea plant.

This study, it is believed, directs attention to Japan green tea as a source of Vitamin C in the diet.

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1. Miura, M: *Proc. Japanese Assoc. Agricult. Chem.*, Vol. I, No. 1, October 1924.

2. Miura, M: *Publ. Assoc. Tea Merchants*. Feb. 1926.

3. As this is an advertisement, it has not been possible to give here the name of the American scientist and of University concerned. These names will be supplied to physicians upon application. American-Japanese Tea Committee, 782 Wrigley Building, Chicago.



The above picture is one of a series illustrating the Seventh Edition of the treatise "Habit Time."

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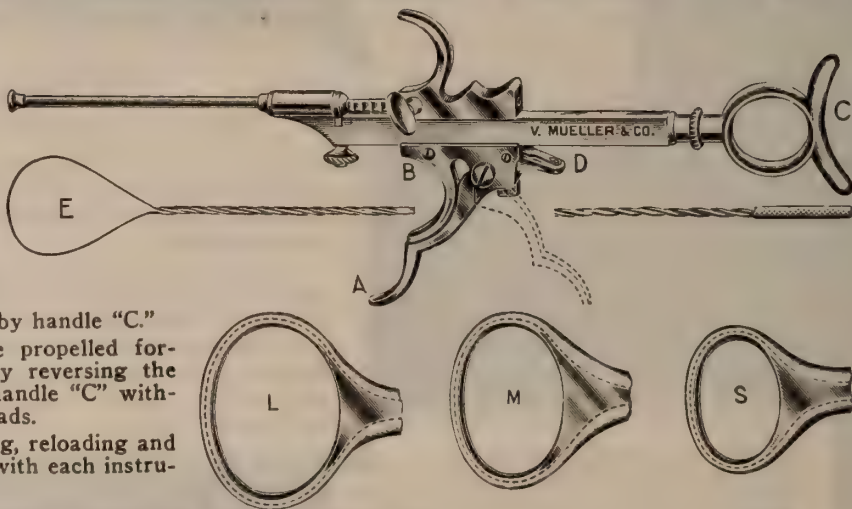
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References: Dr. I. O. Denman, Ear, Nose and Throat Monthly, March 1923 and January 1926. Dr. H. Gerstenberger, Amer. J. of Diseases of Children, Oct. 1922, p. 320. Dr. J. Zahorsky, Mo. State Med. Jour., Feb. 1925. Drs. A. R. Hollender and Maurice H. Cortle, Amer. J. of Phys. Therapy, Apr. 1925, and Eye, Ear, Nose and Throat Monthly, Feb. 1925.

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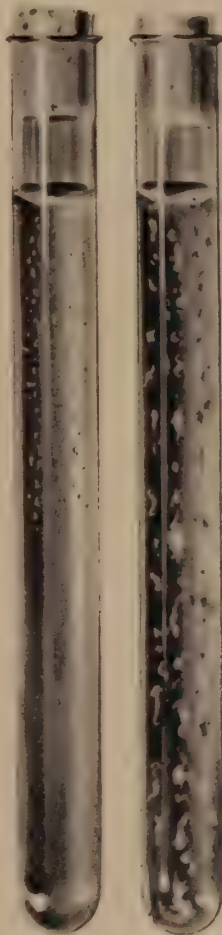


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	Vaccine Cases	Mortality Rate	Control Cases	Mortality Rate
Treated within				
48 hours of onset.....	76 cases	7.8%	101 cases	47.5%
72 hours of onset.....	122 cases	11.6%	171 cases	42.1%
All cases treated.....	381 cases	24.1%	459 cases	38.5%

See published reports by Dr. Alexander Lambert, Transactions Assn. of American Physicians 1926, abstracted in J. A. M. A. 7/3/26, page 56, and Dr. Don C. Sutton, Illinois Medical Journal, April, 1928, or write for details to

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## Book Notes

**THE NEWER KNOWLEDGE OF BACTERIOLOGY AND IMMUNOLOGY.** By Eighty-Two Contributors. Edited by Edward O. Jordan and I. S. Falk, the University of Chicago. Chicago, Illinois. The University of Chicago Press. 1928. Price \$10.

A complete and up-to-date summary of progress in fields in which unusually rapid progress has been made during the last decade. This work makes available for students and active workers the latest results of investigation in various lines of bacteriology and immunology. The work is not intended as a text book, nor does it pretend to be a comprehensive survey of the whole field. It does give however an authoritative critical review of topics in which at the present time interest is particularly keen or investigation most active.

**SPECIAL CYSTOLOGY. THE FORM AND FUNCTIONS OF THE CELL IN HEALTH AND DISEASE.** A text book for students of biology and medicine. Edited by Edmin V. Cowdry. The Rockefeller Institute of Medical Research. 693 Illustrations. New York. Paul B. Hoeber, Inc. 1928. Price \$20.

The contributors to this work are Doctors Leslie B. Arey, Percival Bailey, R. R. Bensley, C. H. Bunting, Alexis Carrel, E. A. Cohn, G. W. Corner, E. V. Cowdry, Hal Bowney, G. Carl Huber, J. Albert Key,

E. B. Krumbharr, Albert Kuntz, Leo Loeb, C. C. Macklin, M. T. Macklin, E. F. Malone, F. C. Mann, David Marine, A. A. Maximow, E. B. Meigs, C. W. Metz, W. S. Miller, Eugene L. Opie, Wilder G. Penfield, A. T. Rasmussen, J. Parson Schaeffer, G. E. Shambaugh, P. G. Shipley, G. N. Stewart, D. R. Stockard, D. L. Stormont, Frederick Tilney, T. Wingate Todd, G. B. Wislocki.

This work is intended as supplementary to an earlier volume called "General Cystology," published by the University of Chicago Press in 1924. In this work each division was intrusted to an investigator who through his own researches has personal knowledge on the subject on which he wrote.

The purpose of the book is to present a detailed statement of the types of cells which make up the body, and which serve different functions; the nerve cells, the gland cells, blood cells, and others. The authors have included physiological and pathological conditions.

**LOBAR PNEUMONIA. A ROENTGENOLOGICAL STUDY.** By L. R. Sante, M.D. With a foreword by James P. Case, M.D. New York. Paul B. Hoeber, Inc. 1928. Price \$3.00.

This work is a correlation of roentgen-ray findings with clinical and pathological manifestations. This monograph marks another important step in the evolution of roentgenology.

(Continued on page 53)

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SIR ALMROTH E. WRIGHT, M.D., Lancet, Dec. 24, 1927

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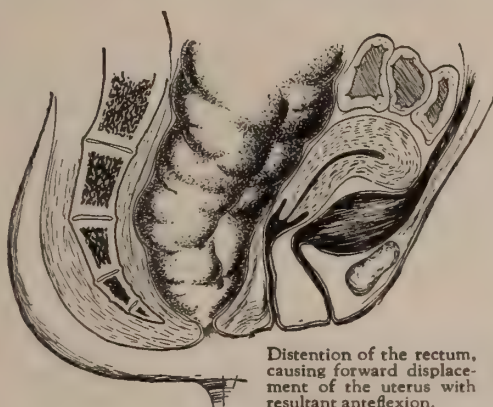
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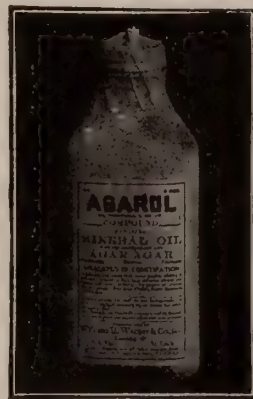
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For further literature on this subject see:—

*Boston M. & S. Journal—Feb. 24, March 31, 1927*

*Journal A. M. A.—Oct. 1, Dec. 24, 1927*

*Am. J. Med. Sci.—November, 1927*

*Annals Int. Med.—January, 1928*

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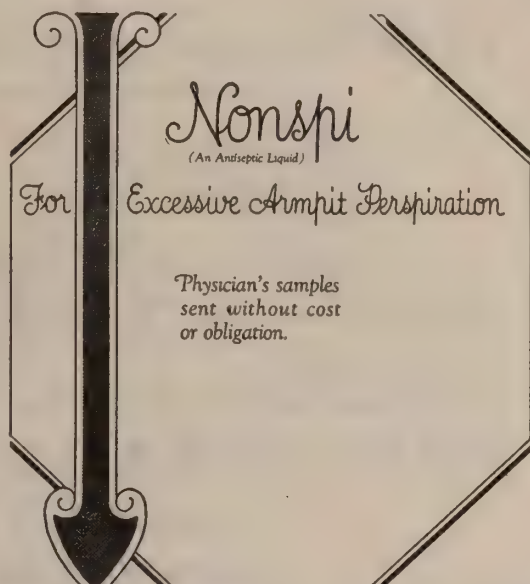
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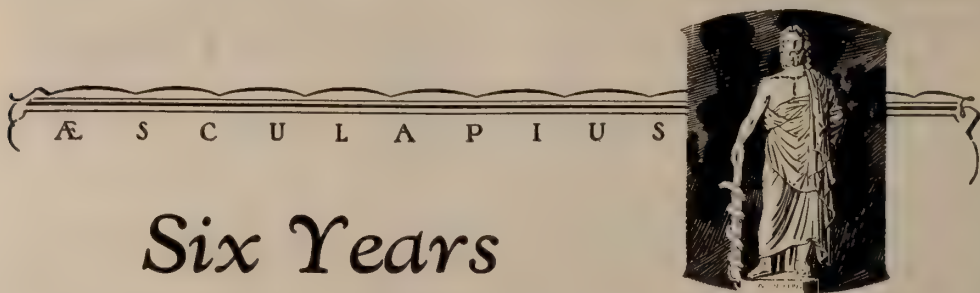
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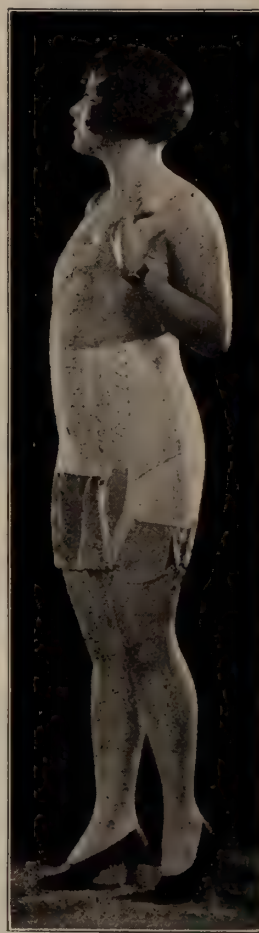
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(Continued from page 18)

tion through which roentgenology has been passing. **CLINICAL ASPECTS OF THE ELECTROCARDIOGRAM.** By Harold E. D. Pardee, M.D., with sixty illustrations. Second edition revised. New York. Paul B. Hoeber, Inc. 1928. Price \$5.50.

Electrocardiogram examination of the heart is of great importance. It gives evidence of involvement of the myocardium in numerous diseased processes.

This volume presents the important acquisitions of knowledge in recent years.

**CARDIAC ARRHYTHMIAS.** By Irving R. Roth, M.D. With introduction by Emanuel Libman, M.D. With eighty illustrations and five tables. New York. Paul B. Hoeber, Inc., 1928. Price \$7.50.

In this work the author describes beautifully the normal anatomy and physiology of the heart, and the mechanism and clinical characteristics of the various types of arrhythmia. This volume should be particularly valuable to the general clinician.

**PHYSICAL DIAGNOSIS.** By W. D. Rose, M.D. Fifth edition. Three hundred and ten illustrations and three colored plates. St. Louis. The C. V. Mosby Company. 1927. Price \$10.00.

In this volume further consideration has been given to the pathologic physiology of heart disease. The manifestations of incipient cardiac insufficiency have been stretched. Minor alterations have been made in the sections dealing with endocarditis and with pulmonary tuberculosis.

Older illustrations have been eliminated from several sections, and new illustrations have been added to the text in many places.

**STRABISMUS. ITS ETIOLOGY AND TREATMENT.** By Oscar Wilkinson, M.D. Illustrated. St. Louis. The C. V. Mosby Company. 1927. Price \$10.

The object of this book is to impress upon the public, the general practitioner and the oculist the importance of early definite treatment of strabismus and to warn them of evil that "watchful waiting" brings to this afflicted class.

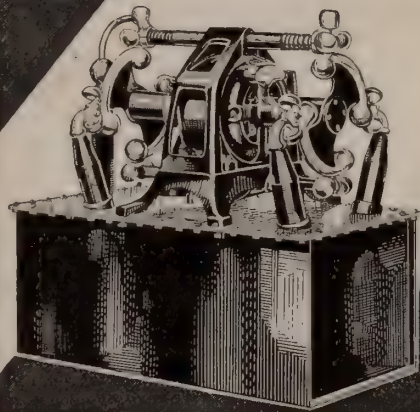
The author presents operative procedures and discussions, giving without bias their merits, difficulties, and defects as viewed from the author's own experience.

**GYNECOLOGY FOR NURSES.** By Harry Sturgeon Crossen, M.D. 365 engravings, including one colored plate. St. Louis. The C. V. Mosby Company. 1927. Price \$2.75.

This work presents a brief survey of pelvic anatomy and physiology of gynecologic diseases, and of the methods employed in examination, diagnosis and treatment as well as the details of gynecologic nursing in its various phases.

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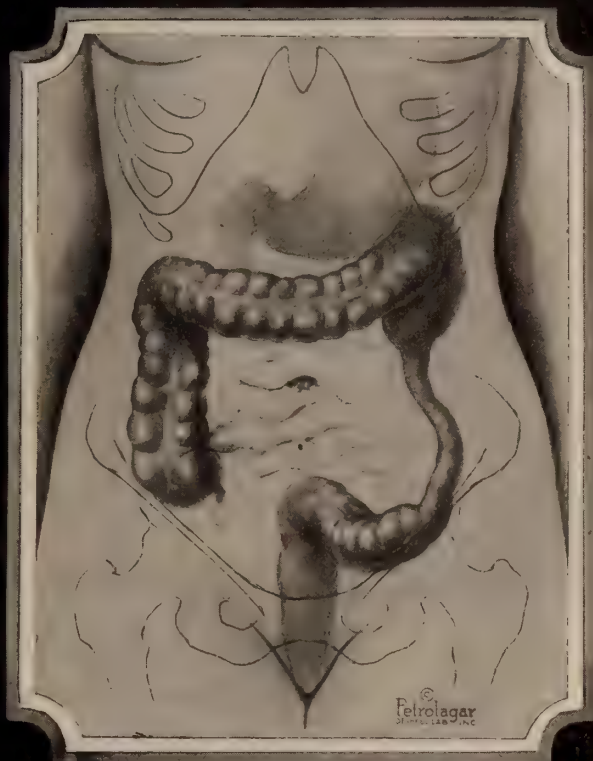
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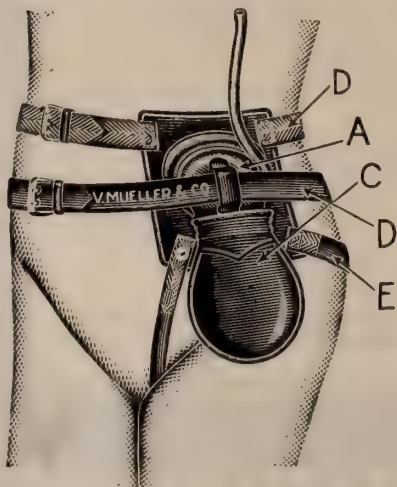
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Two cubes to a cupful of piping hot water make this pleasant bromide broth doctors and patients alike agree is so effective

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The above findings are compiled from published reports by Dr. Alexander Lambert, Transactions Assn. of American Physicians 1926, abstracted in J. A. M. A. 7/3/26, page 56, and Dr. Don C. Sutton, Illinois Medical Journal, April, 1928.

Why not carry a vial of Sherman's vaccine — formula 38 — in your bag and be prepared to administer same immediately as soon as pneumonia—any type—is suspected or diagnosed.

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# Japan green tea as an antiscorbutic



Recent studies<sup>1</sup> and observation during the World War have suggested that "latent scurvy" resulting from diets poor in Vitamin C may be widespread in this country. Before scurvy becomes manifest there is a period of ill health characterized by these symptoms: sal-low, muddy complexion, loss of energy, fleeting pains in the joints and limbs usually mistaken for rheumatism.

Attention has been directed to quantitative experiments conducted to establish the antiscorbutic value of foods not hitherto known to contain Vitamin C.

Tests have been carried out to substantiate the work of Miura<sup>2,3</sup> which indicated the presence of Vitamin C in Japan green tea. Guinea pigs were used and the curative method was followed. The results show that "the daily minimum curative dose of pan fired Japan green tea is apparently between ten and fifteen cc. (about one-half fluid ounce) of a two per cent infusion."

It is interesting to consider that while oxidation is known to destroy Vitamin C, this tea is prepared by the Japanese according to a method which

does not include fermentation. Japan green tea obtained from ordinary commercial sources in this country, is the natural leaf of the tea plant dried by the application of artificial heat. In the opinion of the investigator the presence of Vitamin C in Japan green tea depends upon the fact that it is made up of the *unfermented* leaves of the tea plant.

Physicians who wish to plan diets in which the intake of Vitamin C is to be increased, may find a convenient method in Japan green tea. American-Japanese Tea Committee, 782 Wrigley Building, Chicago.

---

1. *As this is an advertisement, it has not been possible to give here the names of the American scientists and of the Universities concerned, nor the titles of their reports and publications. These names will be supplied to physicians upon application. American-Japanese Tea Committee, 782 Wrigley Building, Chicago.*

2. Miura, M: *Proc. Japanese Assoc. Agricult. Chem., Vol. I, No. 1, Oct. 1924.*

3. Miura, M: *Publ. Assoc. Tea Merchants. Feb. 1926.*

# Radiant Heat Therapy with the Victor Thermospectral Lamp

## A Duplex Outfit Using the Incandescent Bulb and Infra-Red Unit Interchangeably

WITH the countless number and varieties of so-called therapeutic heat lamps on the market, advertised to both the medical profession and the public, little wonder that many physicians are at a loss when it comes to the selection of an outfit for the office or clinic.

Just as a correct drug prescription requires a knowledge of the action of the drugs prescribed, so does the intelligent use of any physical therapeutic energy require a knowledge of the nature of that energy. Eminent physicists deplore the fact that more accurate data have not been given in many investigations, especially pertaining to the wave-

lengths of radiant energy employed and the too frequent use of indefinite terms in describing results. In other words, reported clinical results with radiant energies are distinctly valuable only when the spectral limits and the spectral distributions of the energy employed have been definitely determined.

It is on this basis that the Victor Thermospectral Lamp is presented. It is virtually two outfits in one, in that the incandescent bulb and infra-red unit may be used interchangeably. The spectral ranges of the two energies derived are as follows:

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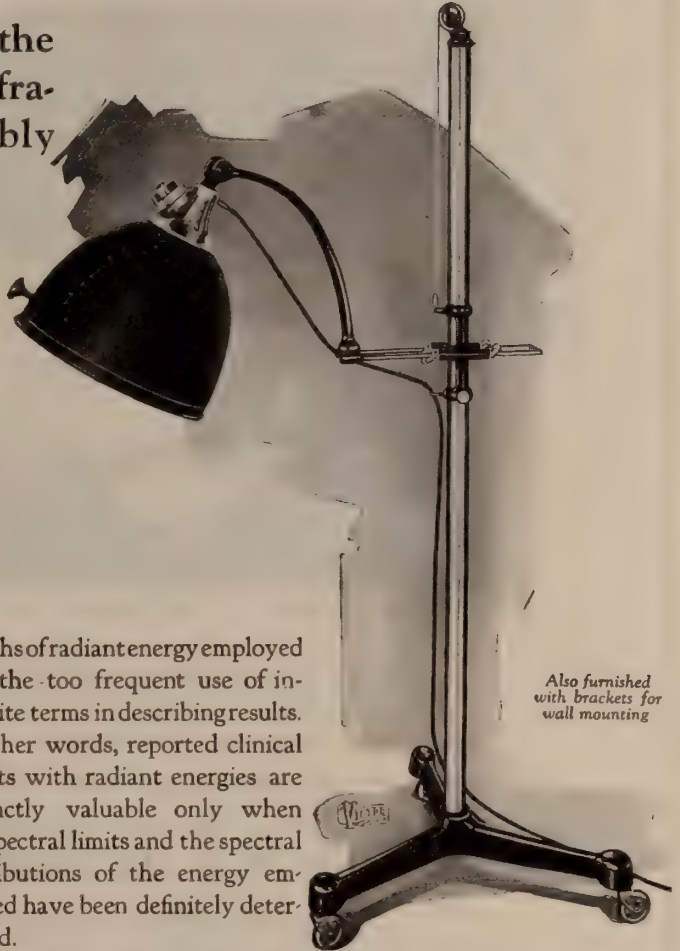
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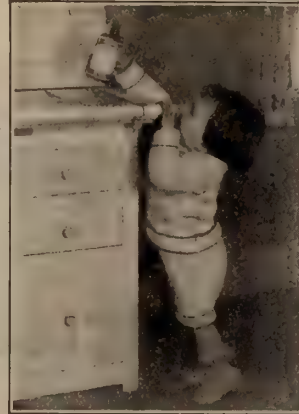
"What parade?" asked the father.

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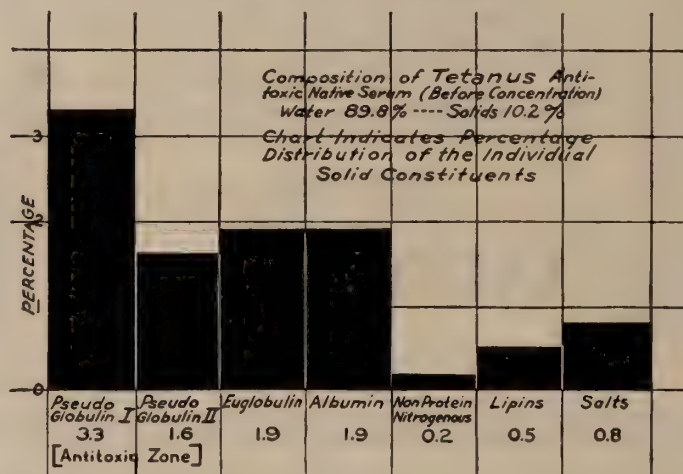
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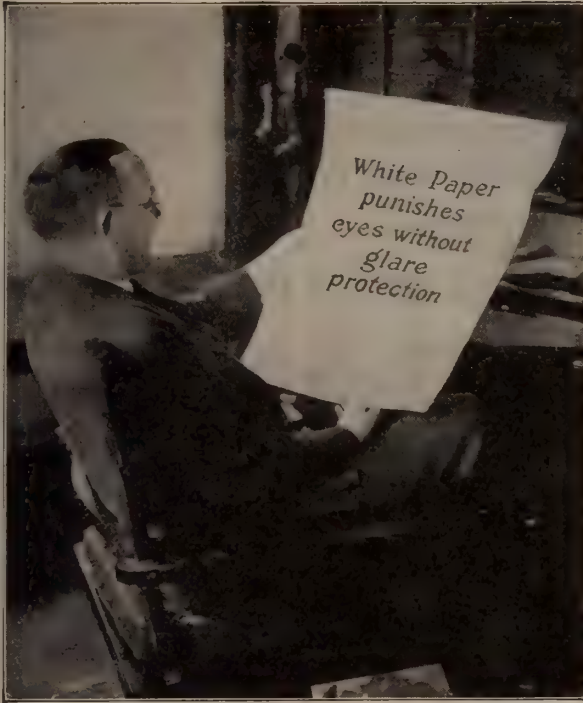
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For further literature on this subject see:—

*Boston M. & S. Journal—Feb. 24, March 31, 1927*

*Journal A. M. A.—Oct. 1, Dec. 24, 1927*

*Am. J. Med. Sci.—November, 1927*

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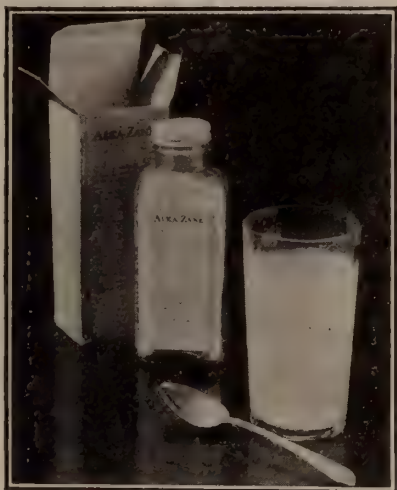
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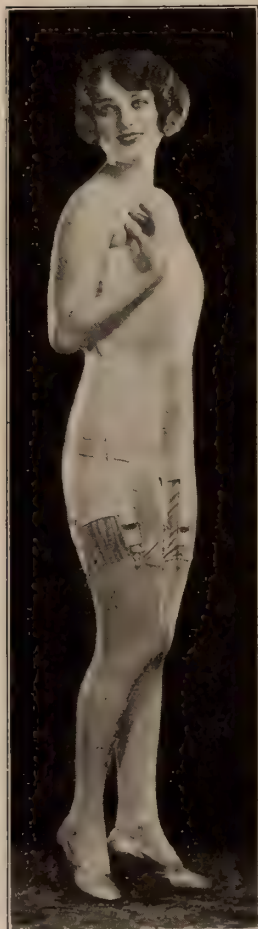
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## Book Notes

**MUSCLE FUNCTION.** BY WILHELMINE G. WRIGHT. New York. Paul B. Hoeber, Inc., 1928. Price, \$3.50 net.

In this work the author attempts to show how we perform various movements. The question is well elucidated in this book. The work is intended for students of muscle function.

**ASTHMA. ITS DIAGNOSIS AND TREATMENT.** BY WILLIAM S. THOMAS, M.D. Twenty illustrations in black and white and six in color. New York. Paul B. Hoeber, Inc., 1928. Price, \$7.50 net.

This is the first work in America devoted exclusively to diagnosis of treatment of Asthma. The author has in this work given us a practical guide to the management of asthma patients. He has clearly stated several theories respecting allergy in order to elucidate present day methods of treatment.

An extensive bibliography of the immense literature on this subject is found following the text.

**ALUMINUM COMPOUNDS IN FOOD.** BY ERNEST ELLSWORTH SMITH, M.D. New York. Paul B. Hoeber, Inc., 1928. Price, \$7.50.

This work includes a digest of the report of the referee board of scientific experts on the influence of aluminum compounds on the nutrition and health of man.

The original researches of the author are given in

detail, with a resumé of all the known work upon the subject. This book will be found invaluable to physicians, chemists and others interested in this subject.

**THE MEDICAL CLINICS OF NORTH AMERICA** (Issued serially, one number every month). Volume 11, No. 5 (Tulane University Number, March, 1928). Octavo of 261 pages with 35 illustrations. Per clinic year, July, 1927, to May, 1928. Paper, \$12.00. Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The contributors to this number are Drs. C. C. Bass, Elizabeth Bass, Butler, Castellani, Houston, Hull, Malowitz, Overton, Pigford, C. McD. Smith, J. Holmes Smith, Jr., Sowell, Stewart, Turner, Williford, Worth, Womac.

**LOCAL ANESTHESIA** by Geza de Takats, M. D., Asst. Prof. of Surgery, Northwestern University, School of Medicine, Chicago, Ill., with an introduction by Allen B. Kanavel, M. D., Prof. of Surgery, Northwestern University, Medical School. Octavo of 221 pages with 117 illustrations. Cloth, \$4.00. Philadelphia and London: W. B. Saunders Company, 1928.

This work is a didactic to present methods that have proved to be safe and successful. The author makes no claim to originality neither does he recommend it as a substitute for text books. He does offer it, however, as a guide in the, sometimes, all too voluminous and erratic works on this subject.

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**THE MINERAL BALANCE OF THE HUMAN BODY.** By C. Howard Searle, M.D. Published by the Research Laboratories of the G. D. Searle & Company.

**MECHANICS AND CHEMISTRY OF THE HUMAN BODY.** By Otto Shellberg, New York City. The Shellberg Institute. Price \$1.00.

**THE MEDICAL CLINICS OF NORTH AMERICA** (Issued serially, one number every other month.) Volume 11, Number 4, (Brooklyn Number, January, 1928.) Octavo of 277 pages with 53 illustrations. Per Clinic year, July 1927 to May 1928. Paper, \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

The contributors to this number are Doctors Anderson, Banowitch, Bealties, Cabot, Cornwall, Cross, Evans, Teniblat, Gray, Greenwald, Howard, Ira Joachma, Kroner, Lauri, Moses, Myerson, Rabinowitz, Shookhoff, and Smith.

**BRAIN AND MIND, OR THE NERVOUS SYSTEM OF MAN.** By R. J. A. BERRY, M.D. New York. The Macmillan Company. 1928. Price, \$8.00.

This work is designed to show that the manifestations of the healthy mind result of combinations of brain cells; that if from any cause whatsoever these cells are deficient in numbers, or are in an unhealthy condition, aberrations of the mind will probably result. The author first discusses the general relationship of brain to mind, followed by a careful study of the unit of brain structure, the brain cell or neuron. Next the various combinations of neurons and their several functions from the simple to the complex. From the standpoint of the physician, there can be no diseases which do not disturb the nerve cells concerned. If the cause of the disturbance of these conducting nerves can be ascertained or removed, the patient will be cured. The work is exhaustive, it brings the subject of psychology up to date and should be in the hands of every student of the nervous system and practitioner and every specialist of medicine and surgery.

**FIRST AID AND MEDICAL SERVICE IN INDUSTRY.** Compiled from a survey. New Brunswick, N. J. Johnson & Johnson.

This book of one hundred and thirty-six pages is a condensation of a special survey of a number of typical industries in the United States.

Reports from over seventy industries are given with full detail as to the service with illustrations and dispensaries, operating rooms and examination rooms.

**INTERNATIONAL CLINICS.** A Quarterly of Illustrated Lectures. Volume I. Thirty-eight Series. 1928. Philadelphia & London. J. B. Lippincott. 1928.

The contributors to this number are Lewellys F. Barker, Herbert Black, Henry W. Cattell, F. J. Clemen-

son, Ralph Colp, John B. Dever, Leonard S. Dudgeon, J. Eppstein, Harold Ernberg, J. H. Garverson, P. N. Hanson, Walter F. Harriman, C. W. Henny, E. L. Jones, E. Starr Judd, Knud H. Krabbe, P. Nobecourt, F. Norsk, W. J. O'Donovan, John Rathbone Oliver, H. J. Panner, C. Vincent Patrick, John Phillips, William D. Reid, George Schaltenbrand, Prof. Victor Schmieden, James Stranberg, Alb Tillisch, Alf Westergren, Alfred H. Whittaker.

**CHILDBIRTH.** By WILLIAM G. LEE. An Outline of Its Essential features and the Art of Its Management. By William George Lee, M. D., Chicago. The University of Chicago Press. Price \$3.00.

This book is the final word upon the phenomenon of childbirth—the physician, the nurse, the beginning student in obstetrics and for the mother herself.

**PRACTICE OF MEDICINE.** By HUGHES DAYTON, M. D. Fifth Revised Edition. Philadelphia. Lea & Febiger. 1928. Price \$2.25 Net.

This work is intended as a manual for students and practitioners. The most notable change from the previous edition has been in the chapters on infectious diseases, notably scarlet fever, and in goiter, diabetes and the newer classification of diseases of the kidney. Chapters have been added dealing with the upper portion of the respiratory and digestive tracts.

**THE USE OF SYMPTOMS IN THE DIAGNOSIS OF DISEASE.** By HOBART AMORE HARE, M. D. Ninth Edition. Thoroughly Revised. Illustrated With 124 Engravings With 4 Plates. Philadelphia. Lea & Febiger. 1928. Price \$5.50 Net.

This work has gone rapidly through nine editions. This speaks well for its popularity. In this edition the author has omitted laboratory methods and lays special emphasis on symptomatology. This volume is essentially devoted to a plan whereby a recognition of symptoms will lead the physician to a diagnosis.

**WHAT YOU SHOULD KNOW ABOUT HEART DISEASE.** By HAROLD E. B. PARDEE, M. D. Philadelphia. Lea & Febiger. 1928. Price \$1.50 Net.

This book is intended to enable anyone who reads it to find out those things about heart diseases which he would like to know. The author believes that it is well for the patient to understand his condition in so that he may be able to help cure by co-operating with the physician.

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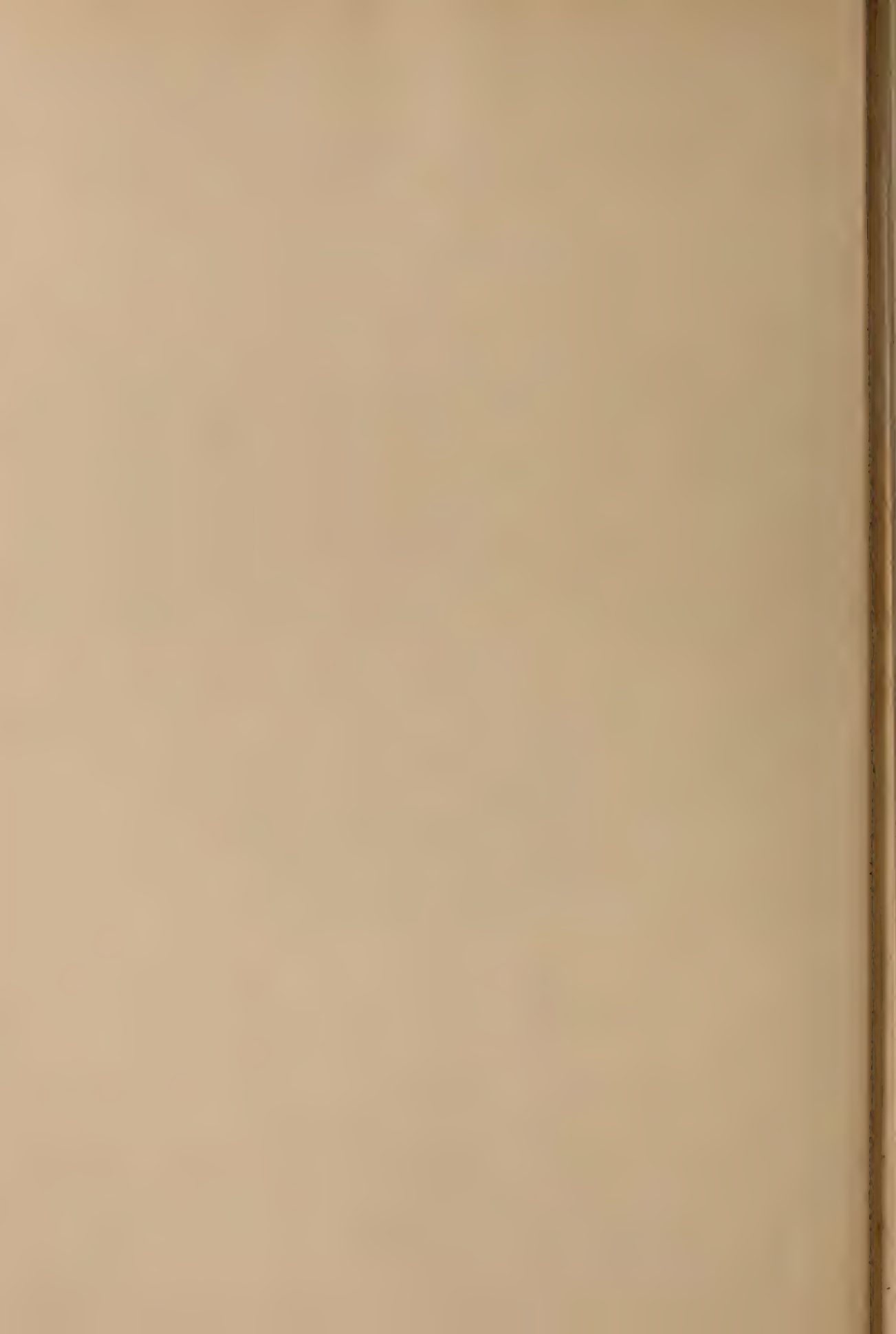
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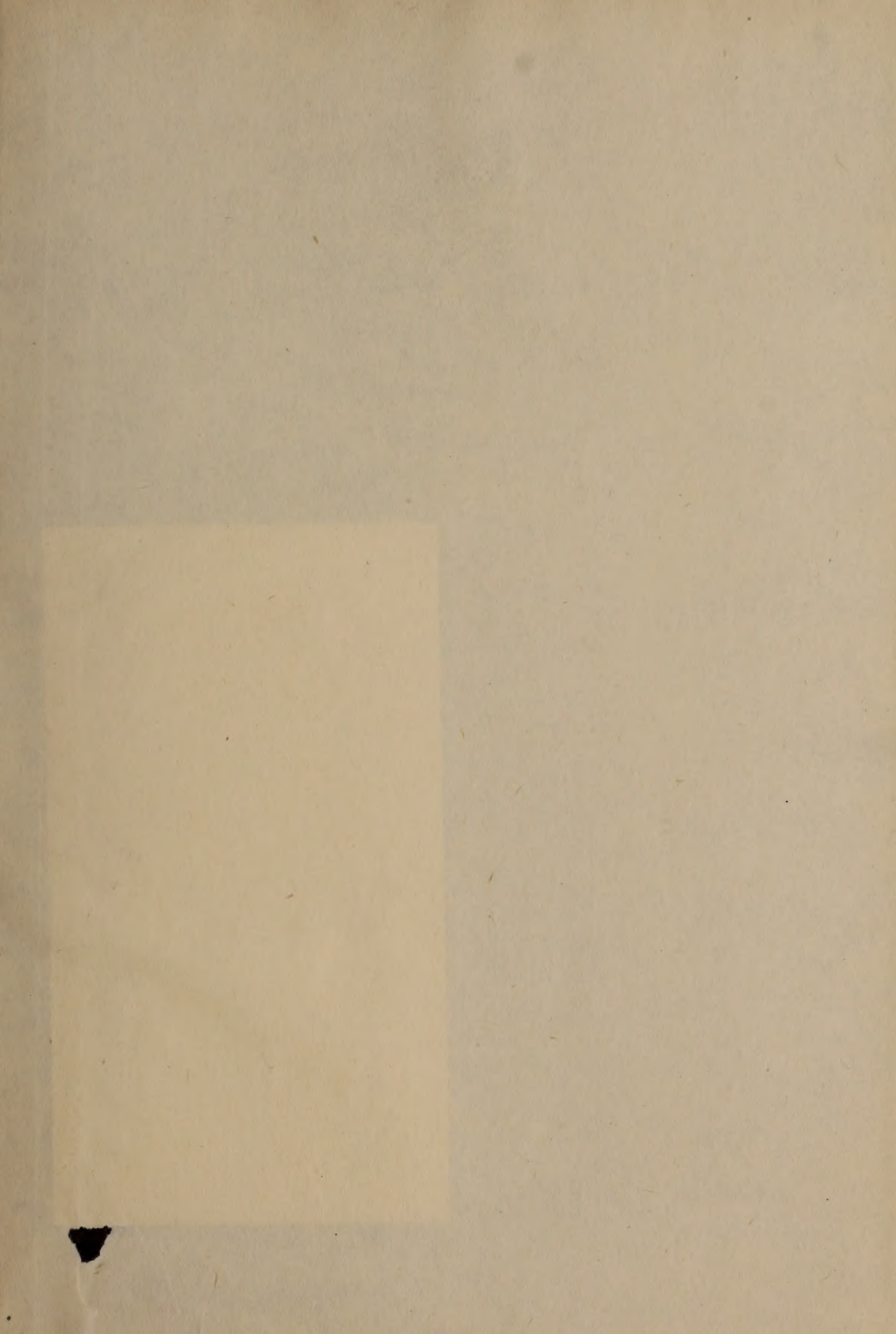
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